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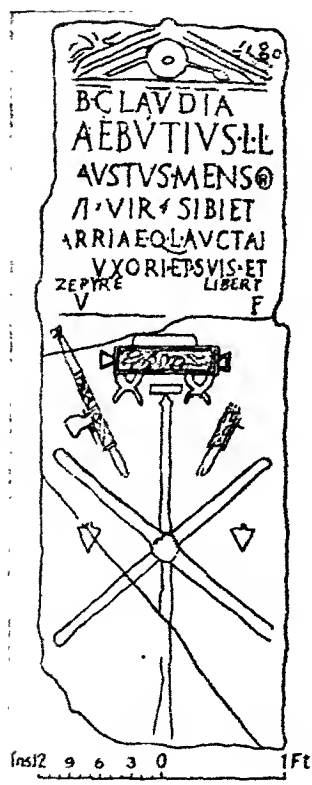
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ANCIENT EGYPT.

RESEARCH IN THE FAYUM.

THE work carried on this year by the British School on the Badarian age and early history of the Fayum, has been described by Miss Caton-Thompson and Miss Gardner ; from their letters the following extracts will show how strenuously results are being obtained. Sentences in brackets [] are added to explain the position. The number of workers made it needful to have two cars for the supply of water from fifteen miles' distance, and also for more distant research to the west of the lake.

" Near Dîmeh, December 14. We got settled here on the 9th, having stayed at Kom Ashim since the 4th. [This work at Ashim, or Wushim, by the Michigan expedition is the base for reaching supplies.] We got a good deal done at Kom Ashim, including an investigation of sections in the Bats cutting near Edwa, to examine the fauna of the lowest Nile alluvial deposits where they rest on the tertiary series. Then Miss Gardner and Mr. Sandford did a useful cross section near Kom Ashim with examination of the lacustrine beds at low levels. I spent a long day trying to find a practicable car route to the west end of the lake, which I am anxious to get examined and levelled before the winds begin. I got to a point some eight miles west of my furthest last year, and then had to give it up, beaten by the appalling going. One could actually get a car there no doubt, but it would not stand the strain two weeks, and probably less. [The whole of this north side of the lake was hitherto declared to be totally impossible for cars.] So I have changed the plans compulsorily and have established a camp half a mile south of the ruins here, which affords a good field for work, and gives me a good starting-point for again trying to find a way west.

" Dîmeh, January 13. It is becoming quite plain that we are dealing with more than one simple rise and fall of the lake within Pleistocene times. The difficulty of course is to correlate these periods with archaeological evidence. We have worked very hard at Ptolemaic levels, which we believe to have been lower than those usually accepted. In this area we have also identified, beyond question, a clearly defined shore-line at 189-190 feet above present lake [46 feet over sea] along which our prehistoric people are much in evidence. Contouring shows that water at this level would be confined within a big basin, full of eroded clays, lying to the west from here, which would appear to be entirely self-contained, and had no connection with the lake basin on the one hand, or the Qasr el Sagha basins on the other. On the slope down to the Birket Qarun, however, we have

got flint at 176 feet, on a ridge where it is difficult to conceive they have been washed. [32 feet over sea, submerged since 9000 B.C.] A fair quantity of pignies with many pigmy cores have come from as low as 138 feet [6 feet below sea, submerged since 17000 B.C.].

"Dateable Ptolemaic houses lie at 172 feet [showing the later drying of the lake down to 28 feet over sea], and Roman levels (probably about Ist or IIInd century A.D.) are best given by the Geziret el Qom cemetery at 66 to 78 feet above lake [dried to 78-66 feet below sea]. We have got through some detailed work on the great paved way leading north to the temenos walls [of Dimeh] with its step termination . . . we feel sure that it has never had anything to do with water; nor is it all of one period; badly executed additions have been made which I have endeavoured to show in plan. We have also done careful levelling and planning of what appears to be an elaborate irrigation system lying to within some 600 yards of the N.W. corner of the Dimeh mounds.

"I have got eight Quftis and two boys, beside the cook and chauffeur. The second car boy left ten days ago, as he could not stand the desert for £5 a month! He left at an opportune moment, as the car was out of action with obscure engine trouble. She has been in Medineh a week with the Ford people, and Dr. Askren is kindly keeping a watchful eye on her repair. With our remaining car we have kept up an adequate water supply, but had a moment of touch and go last week, when it broke down some twelve miles from Kom Ashim and eight from here. Luckily it was the return journey and the tanks were full. I happened to be there, having gone to Kom Ashim to identify some Ptolemaic sherds. As it was the differential gear which snapped, and the breakdown was complete, I ordered the chauffeur and Hofny to tramp back immediately to Kom Ashim, and get on to Fayum for help the next day. This they did, reaching Kom Ashim by a miracle on a moonless and starless evening. I tramped to Dimeh by myself, and got in just as the last light was giving out. I rationed out the remaining water, two tumblerfuls per head for that night, and the next morning all the men went off to the broken-down car and replenished buckets and jugs from the tanks and returned with enough to relieve anxiety. Fayum was very prompt, and sent out mechanics and the necessary parts immediately [about 30 miles], and the car was brought in that same evening.

"Camp at Kom W., February 8. We are hard at work at the Kom [a settlement three to five feet deep] and it is producing a lot of the evidence we want. It has absolutely settled the question of the contemporaneity of the flints—the polished stuff—the pottery and the bone arrows. The only disappointment (and I hardly dared to hope otherwise) is that only the one culture is represented. We may be able to make out something of the pottery changes within its own range, but until I have finished I won't prophesy even about that. A complete pot is rare, only fourteen so far, but halves will come in equally usefully, and there are a number of them, besides rims innumerable. It is mostly coarse domestic stuff, but an element of better ware is there with a good polished red surface, though so far I cannot get the shape. The most interesting piece is a conical dish with a small foot [less foot than the dishes Pre. Late 86] in the usual coarse ware. We have not so far got a place deeper than 4 feet [of mound], but are only on the east fringe of the top of the mound. I am working it in 160-foot strips, 20 feet wide. I am on the work the whole time, and not a pebble has been found which was not in my hands immediately, and everything of importance is fixed on the latitude and longitude system. You must not expect a great heap

of stuff from it, but what I have got is quite invaluable for the purpose of introducing this new picture of prehistoric Egypt. There are practically no objects outside of flints—polished and chipped or ground celts—and pottery, but yesterday we got a disc-shaped limestone mace-head from near the top. The men are working admirably.

“GERTRUDE CATON-THOMPSON.”

[Mrs. Benson now joined the camp till the end of February.]

The summary of work which Miss Gardner supplies is as follows :—

“The geology of all this area is most interesting, and the most important fact as far as the Fayum people are concerned, is that they were living on an old lake surface, not on tertiary rocks as had been supposed. We have found very clear evidence of at least two lakes, the older one, as far as it has been traced at present, is that mapped by Beadnell and given by him as \pm 23 metres above O.D. [75 feet, or 219 feet over lake]. The deposits consist of a thick series of greenish sands, and clays with occasional loamy bands generally full of shells. It is the harder sandy beds that give rise to the outstanding groups of rocks among which the Fayum people seemed to like to live. The white clays, which form such a striking feature in the depressions seem to be older than the sands, as they are overlain by them at the edges of the depressions. The old lake seems to have dried up and the deposits denuded very considerably before the waters of the second lake gained access to the Fayum. This was very clearly seen at Dimeh along the E. and W. embankments in the West basin. The underlying rock was old clay deposit, hardened and cracked vertically. Further down the side, and in the bottom of the basin the old clays were overlain by softer grey clays lying horizontally on the older beds.

“There was an extremely interesting section quite close to the camp, which showed much the same thing, only there the overlying beds were loams and a well-worn gravel, the first we had come across. It consisted of flattened and rounded or oval pebbles of limestone chiefly, some sandstone and a little quartz. It contained a few shells of a type which, up to the present, have not been found in the older beds—*Corbicula* was among them, but is found in the older beds too. I suppose the conclusion is that both lakes were connected with the Nile. The gravels are at 187 feet above the lake, and form the surface of a small isolated flat-topped gebel, which appears to be entirely made up of lake deposit. The interesting point is that this gebel is at the same level as the south end of the plateau on which Dimeh is built, which slopes down from the base of the mounds on the south side from 210·9 to 188·0 [feet over lake].

“It would seem from this that both tertiary and lake beds have been planed off at some subsequent period, and that since then an E. and W. drainage or erosion of some sort has left the isolated gravel hill.

“The old lake deposits are strewn with an immense quantity and variety of rock, while the younger series are much cleaner and smoother. We have been here, in our new camp, just over three weeks, though it seems about half the time. Miss Caton-Thompson is on the Kom all day, and is enclosing a note about it. While exploring one day to the east of the Kom Miss Caton-Thompson found another site—again lying on the north side of a depression in which water is at present lying. To the north is a fairly steep scarp which forms the divide between the Ghindi depression and those to the south. A considerable quantity of material was scattered about over the slope at levels varying between 203 feet

and 156 feet above lake [submerged since 14000 B.C.]. At the lower level there were a considerable number of pots, one of which Miss Caton-Thompson considers to be prehistoric, I believe. We found hearths at the higher levels. At the east end of the scarp there is a Vth dynasty mound overlying old lake deposits. Mr. Starkey was taken there one day by an Arab, and he told us about it, as he found Fayum flints mixed up with the pottery. As that area seemed an important and productive one, Miss Caton-Thompson advised taking the line of levels from the lake to the scarp and then westward to the Kom. The height of the Vth dynasty mound is 225 feet, too high, I suppose, to be of much interest as far as lake levels are concerned. I have finished that stretch—about five miles—and am now on the last lap. We were over in that part last market day, and fell in with an Egyptian on the Desert Surveys—who had just mapped the area between Cairo and Ghindi; he gave us one or two heights for prominent points, which will be most useful.

“There is an interesting section in a wady between here and the new site, which again shows gravels, but of an entirely different type. They are full of flints, mostly wind-worn, and contain a fair number of rather large, thick-shelled Corbiculas. I am especially interested in these as they are very similar to those in the gravel underlying the Dimeh paved way. The gravels overlie a greenish sand, which passes down into white clays at the bottom of the wady, so I suspect that the whole series belongs to the older lake beds. The surface of the gravel is, I should judge, about 185 feet above lake level [submerged since 8000 B.C.]; a considerable number of Fayum implements were found on it.

“The second car has come back at last, and goes very much better; the new chauffeur comes from Aswan, and seems to be shaping quite well. We have just come back from a market-day expedition to Widan-el-Faras—it is a marvellous feat to have got the car up to the higher plateau—it looks a complete impossibility from below. It was an ideal day, and there was a most magnificent view from the top. It is a most fascinating country from every point of view, and I am enjoying every minute of the time. It is a great pleasure to work with Miss Caton-Thompson, and a very great help to be able to discuss geological problems with her.

“The telescopic alidade is a great success; thank you very much for providing it, it saves hours of labour in taping and simplifies the mapping enormously as I can pick up sights miles away.

“When these levels are finished I want to link up this area with Qasr el Sagha, and then I hope to spend a day or two at the west end of the lake, when the scarp comes close to the shore. I want, if possible, to find out if the same sequence of beds occurs there, and the levels of all the lake beds at that end.

“Domestic problems are arising, our dinner flew away on the return journey from market, and a substitute must be provided, also you will be getting tired by this time of all this geological talk.

“ELINOR W. GARDNER.”

These extracts will show how strenuously the long-delayed study of the history of the Fayum is now being carried out, and how it promises to give a firm basis for the early history of the civilisation of Egypt, linking the archaeology to the close of the geological changes.

F. P.

FEUDAL CURRENCY IN ROMAN EGYPT.

THE hoard of late Roman coins found by Mr. Brunton at Qau el-Kebir last year has proved on detailed examination to present one novel feature of interest, besides throwing some light on the currency of Egypt about the year A.D. 500.

The number of pieces included in the hoard was 2,741, which may be summarily classified as follows :—

(1) Coins struck before A.D. 300	..	.	..	..	8
(2) Imperial issues, Constantine I—Jovian	..	..	..	..	157
Defaced pieces, apparently of this period	..	..	..	..	70
(3) Imperial issues, Valentinian I—Honorius	..	..	..	..	428
Defaced pieces, apparently of this period	..	..	..	..	183
(4) Imperial issues, Theodosius II—Zeno	..	..	..	..	208
Defaced pieces, apparently of this period	..	..	..	..	45
(5) Barbarous imitations of coins of group (3)	..	..	..	..	370
(6) " " " " (4)	..	..	..	..	86
(7) Miniature copies of coins of group (1)	..	..	..	..	2
(8) " " " (2)	..	..	..	..	142
(9) " " " (3)	..	..	..	..	146
(10) " " " (4)	..	..	..	..	197
(11) " " " (5)	..	..	..	..	105
(12) Miniature copies of Axumite coins	..	..	..	..	16
(13) Miniature copies not definitely identifiable	..	..	..	..	196
(14) Totally illegible	..	..	..	..	382

The date of burial of the hoard can be fixed fairly closely. There are only a few coins of Basiliscus and Zeno, and these are hardly worn at all. The specimens of the issues of Leo I are very numerous, and also for the most part in fresh condition. There is no trace of anything later than Zeno. So it is safe to conclude that the hoard was formed and secreted in the early years of the reign of Zeno, about A.D. 480.

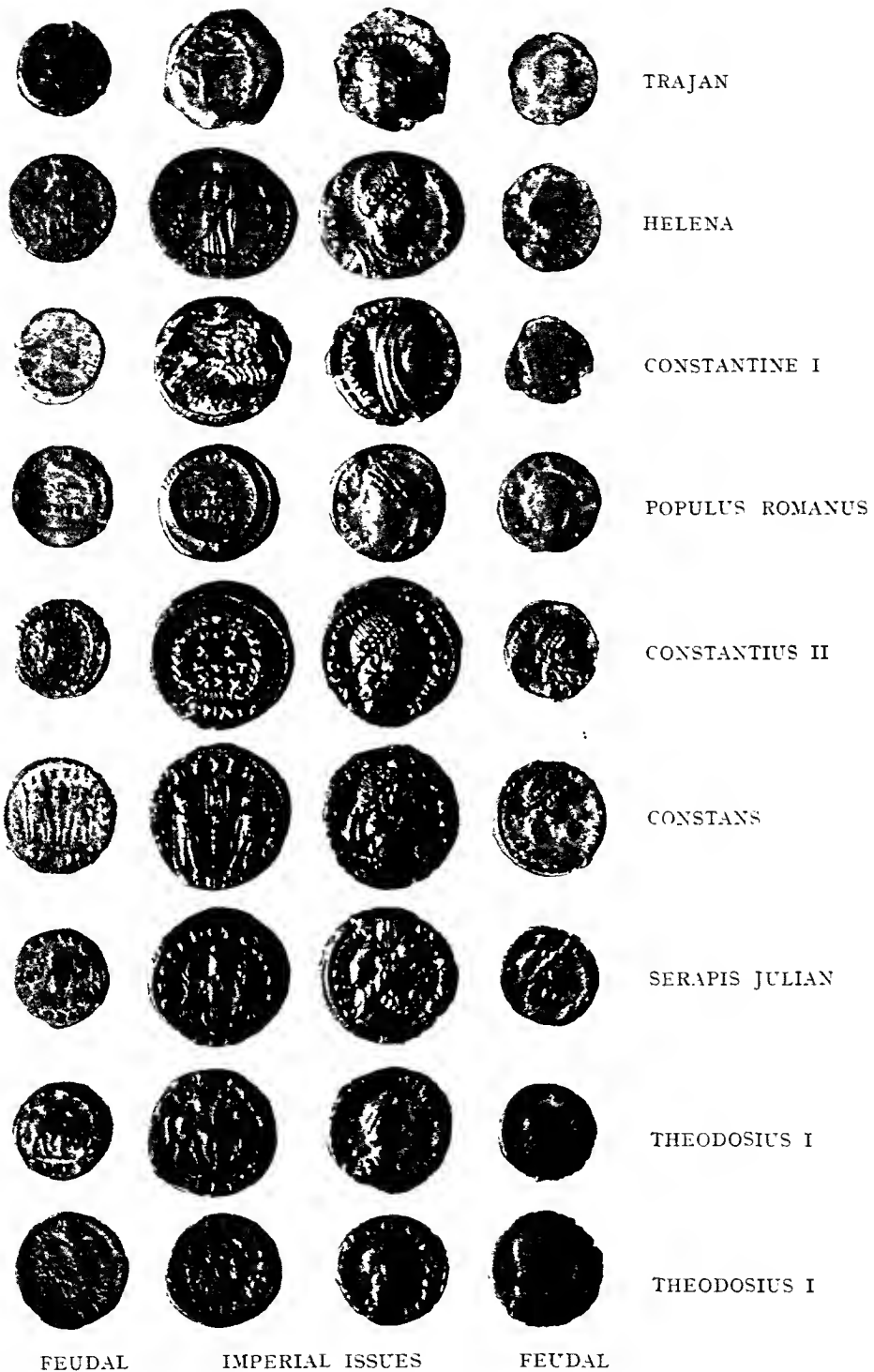
The composition of the hoard, in most respects, is similar to that of other Vth century hoards found in Egypt, the great bulk of it is made up of coins, in all stages of wear and decay, issued from the imperial mints after the reform of Diocletian had introduced into Egypt the monetary system of the rest of the Empire, together with barbarous copies of these issues; but mixed up with these are a few earlier coins which were demonetized by the reform, such as the bronze of the local Alexandrian series, or which never had any legal currency in the country, the earliest of the latter being a bronze coin of Neandria in the Troad struck in the IVth century B.C. The new element in this hoard consists in the large groups of miniature copies, many of them fairly well executed, which merit a special note.

These copies differ markedly from the cast forgeries of contemporary currency, which are commonly found on Egyptian sites in the strata of the first half of the IVth century A.D. The Constantinian forger made a clay mould from a genuine coin, usually, as it would appear, by pressing the obverse and reverse of the coin on two disks of clay and baking the disks; and numbers of these moulds have been recovered, as well as examples of the coins produced from them, which naturally are of approximately the same diameter as, though generally thinner than, the originals. But the makers of the copies found in the hoard now under consideration reduced the designs which they borrowed from the earlier coins to a fairly uniform size corresponding in diameter with the imperial minimi of the Vth century, which meant the preparation of a model on about half scale in the case of copies of IVth-century types; and this suggests at once that they were not vulgar forgers, but were working under some intelligent direction.

They also differ very materially both in fabric and in artistic merit from the pieces classified as "barbarous imitations." These usually form an appreciable proportion of the contents of Vth century hoards in Egypt; and, as they occur in fresh condition both near the beginning and towards the end of the century, their manufacture seems to have continued for a long period. They are normally struck on thick dumpy flans, which often do not appear to have been adequately heated before striking, and the dies are of very rude execution in nearly all cases. The types are derived from the imperial coins of the latter part of the IVth century; there is nothing that can be traced to an original earlier than Valentinian I. It is possible that these pieces may be the output of the official mint of Alexandria, the technique of which under the Theodosian house was decidedly inferior to that of the other Eastern mints, Constantinople, Cyzicus, Nicomedia, and Antioch; the thick dumpy flans are characteristic of its work at this time, and the dies of the latest issues of Theodosius I and his sons which bear the Alexandrian mint-mark are coarsely executed with blundered legends, and often little better than the "barbarous imitations." A similar class of barbarous copies of the coins of Marcian, Leo and Zeno is found, which may likewise be the output of the Alexandrian mint; coins of these reigns with the name of this mint do not appear to have been recorded hitherto, but there is one in this hoard of the lion-type of Leo I, and this can fairly be described as barbarous in its execution. The clumsy workmanship of these imitations distinguishes them at once from the "miniature copies," which are thin and neat, and there is a further distinction between the two classes in the range of choice of types.

The "miniature copies," as will be seen from the summary, found their models not only in the coins of the latter part of the IVth century, but in practically all the classes of bronze coinage which were in circulation, and are represented in the hoards formed in the Vth century. There are in the hoard one piece copied from a small Alexandrian bronze of Trajan, and another from an imperial bronze of Probus; reproductions of the types of Constantine the Great and his family are plentiful, the contrast here to the "barbarous" class is specially noticeable, and those of the Theodosian coinage are equally numerous. The issues of the Vth century down to the reign of Leo are also copied, and, rather curiously, so are the barbarous imitations just described, although it is evident that the workmen who produced the miniatures were much more skilful technicians than those whose pieces they were copying.

Many of the specimens show very little sign of wear, and this, added to the fact that the types copied include those of the reign of Leo, proves that the



THE FEUDAL COPIES MADE IN THE IVTH CENTURY A.D. COMPARED WITH THE IMPERIAL ISSUES OF COINAGE CIRCULATING IN EGYPT.

manufacture of this class was going on till about the date when the hoard was formed. On the other hand, a few examples of this class occur in another hoard, probably buried about A.D. 430, which was found last season by Mr. Starkey at Kom Washim in the Fayûm, so that the output must have extended over a considerable period, probably not less than half a century.

The question of chief interest is, where and by whom these pieces were issued. No coins of this style have been published previously, except two copies of nome coins of Hadrian, described by Dattari (*Numi Augg. Alexandrini* Nos. 6403 and 6404) as "*monete ibeidi*" found in a hoard of about fifteen thousand small bronze coins from Medum associated with pieces down to the time of Leo I, which was evidently a hoard of the same kind as this from Qau el-Kebir. No details are given as to the presence or absence of other examples of this class in the hoard, so that it is not much help for determining the place of their origin; but Mr. Starkey's hoard just mentioned is more valuable in this respect. It includes twenty-two specimens of the miniature copies out of a total of nine hundred and sixty pieces examined, and these specimens are all worn by circulation. The comparatively small proportion of coins of this class, coupled with their condition, suggests that they originated at some distance from the Fayûm, to which a few drifted after passing through several hands in the course of trade, as one found at Hawara in 1888. Conversely, as the Qau el-Kebir hoard contains a substantial proportion of these pieces, many of which are in fresh condition, including several examples from the same dies, it seems probable that they were produced not far from the place where they were found, and where they must have formed a regular element in the local currency.

If this be accepted, the likeliest explanation of their origin is that they were issued under the auspices of one of the great land-owning houses of Middle and Upper Egypt. During the Vth century the authority of the central government became steadily weaker in the Nile valley, and large districts were organised virtually as feudal fiefs, the lords of which collected the revenues, administered justice, and controlled order, keeping their own bands of irregular troops and their own prisons; the extent of their allegiance to Constantinople was represented by the payment of tribute, nominally the proceeds of taxes levied on behalf of the government, and it is clear from the records preserved in papyri of this century and the next that a house such as that of the Apions of Oxyrhynchus was in a position to disregard at its pleasure the authority of the prefects of the province. It would not have been a greater derogation from the imperial privileges than was implied in many of their known proceedings if these lords did issue a private coinage, there was a precedent for local issues to supply the shortage of official currency to be found in the leaden tokens of the IIIrd century, and the Vth-century miniatures paid the imperial coinage the homage of imitating its types instead of devising independent ones like the leaden tokens. Such a coinage of the lords would, at any rate on their own estates, have had quite as effective a guarantee in the eyes of the populace as anything produced by an emperor at Constantinople. The purpose of copying issues of past reigns may have been to avoid laws against forgery of the coins of the reigning emperor, much as the Egyptian government fifty years ago coined Maria Theresa dollars for which no power was responsible.

The fact that these pieces are designed with some degree of technical skill, as noted above, and are not merely mechanical reproductions of the official issues, seems to support this theory. An ordinary forger would only seek to

produce something that would pass muster as a coin in the cheapest and quickest manner, but a great lord who wished to have a coinage of his own would naturally desire it to be of creditable appearance, and would be in a position to employ competent workmen to make moulds and engrave dies, and virtually to constitute a regular mint.

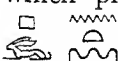
It is true that these coins seem to have circulated over a wider district than that of a single estate; if they were produced somewhere near Qau el-Kebir, they were accepted, as shown above, as far down the valley as the Fayûm and Medum. But there is nothing extraordinary in this if the composition of the hoards which presumably represent the currency of the period is considered. The Egyptians seem in the Vth century to have accepted any bit of metal as equivalent to a coin; every hoard that has been recorded has contained one or more antique pieces of external origin, which can never have had any official status in Egypt; some are from distant autonomous Greek cities, such as that of Neandria already mentioned, with which may be ranked coins of Corinth, Pyrrha in Lesbos, and Cragus in Lycia found in other hoards; others, such as Seleucid and Jewish coins, had not had so far to travel. Again, in all these hoards a great many of the coins are so worn as to be illegible; often it is practically impossible to say whether the smooth disks of bronze were originally coins or not, and occasionally they appear to have been prepared as flans but never struck, and put into circulation without any imprint; these can hardly have fulfilled the proper functions of coins when the guarantor of their value could not be ascertained.

The explanation would seem to be that these pieces of metal were not regarded as having any value derived from their origin, but served simply as counters or units of reckoning—fulfilling the same purpose as, for instance, cowries have done in more recent times in other parts of Africa. A very close parallel was noted at the beginning of the present century in the Saharan oasis of El Wad by Harding King, who found that the local currency consisted of coins of various countries and dates, even Roman, both silver and bronze, mostly defaced, which were simply counted out at the rate of seven to a sou. (*A search for the masked Tawareks*, page 213.) The rapid depreciation of the monetary standard in Egypt during the IVth century made it impossible to attach any permanent valuation to the coinage, some of the coins in these Vth-century hoards had originally been issued early in the IVth century as denarii, but by the end of the century the exchange was quoted at about two million denarii to the gold solidus. The statements of account preserved in papyri of this period do not show what unit these pieces of metal represented, prices and payments are normally given in myriads of denarii, and it is possible that each counter stood for a myriad, but in any case it is obvious that they were as little related to any real value as the paper of a modern bankrupt European state.

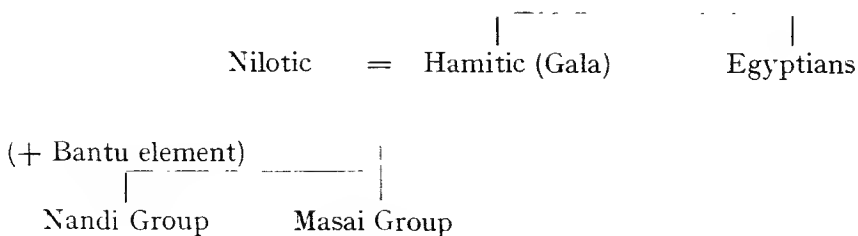
J. G. MILNE.

ON THE CONNECTION BETWEEN EGYPT AND THE MASAI-NANDI GROUP OF EAST AFRICA.





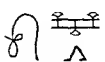






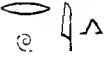



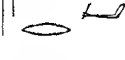

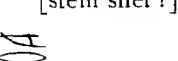

THE group which comprises the Masai and the Nandi, as well as other less-known tribes, may with propriety be termed "Nilo-Hamitic"; the terms "Nilotic" and "Hamitic," both of which are applied, are inaccurate, since the group is derived from a fusion of Nilotic people (*e.g.* Luo, Acholi, Dinka, etc.) and Hamitic, that is, Gala. To the composition of the Nandi must be added a Bantu strain.

Now, it is sometimes said that the Nandi and Masai are "descended from the ancient Egyptians." This is an incorrect view, and it is desirable that their origin should be made clear. The Nandi and Masai are not descended from the Egyptians, but they and the Egyptians may have had ancestors in common. It seems now to be fairly established that the XIIth dynasty had its origin from "invaders akin to the modern Galla" (ANCIENT EGYPT, 1924, p. 41), which is confirmed by the Gala tradition that "their ancestors had conquered Egypt" (*ib.*, 1925, p. 32). I venture to suggest that not only did the ancestors of the Gala conquer Egypt, but also that the Gala themselves sprang from the stock which produced the Egyptians. It seems not improbable that the land of  was somewhere to the north of Kenya Colony, and a region occupied by the Gala; therefore, a supposition that the Egyptians and the Gala have common ancestors may be worth considering. The connection between the various peoples is suggested in the following table:—

People of Punt



I append, with much hesitation, a short list of Egyptian and Nandi words which, it is just possible, may be akin. The resemblance in some cases is very striking, and it seems worth while to put the list on record.

Egyptian.	Meaning.	Nandi.	Meaning.
	eat	am	eat.
	ox	ei [Sukh, egh]	bullock.
	hand	ē [Kony, ā]	hand.
	great (of age)	oo	great.
	march	√U	more.
	cut	√ KES	cut.
	arrive	√in paipai	rejoice, joy (= "that which is arrived at").
	sky	pēt	day, daylight.
	abide	meny	live in a house.
	be ill	mian	be ill
	mistake	nġem	destroy
	flee	rua	rush.
	place	ka	house.
	timber	ket	tree.
	retreat	√KET	go back.
	write	sir	daub (secondary meaning, write).
	nose	ser	nose
	[stem sher?]		
	love	murer	(girl) lover.

G. W. B. HUNTINGFORD.

THE SPENCER-CHURCHILL SCARABS.

AMONG the treasures which Capt. Spencer-Churchill has collected at Northwick Park, are some scarabs selected for their fine work and inscriptions ; these he has kindly allowed to be published here.

- | | |
|---|-----------------------------|
| 1. " Prophet Amenemhat, this <i>ka</i> is praised by all." | Obsidian—J 13 |
| 2. Scribe Ameny, may the excellent <i>ka</i> flourish and live. | Green jasper—H 80 |
| 3. Antef-ka-nefer, son of Mentu-hetep, follower. | Green jasper—C 32 |
| 4. Knowing the king, Apepa, living again. | Obsidian—J 13 |
| 5. Scribe of the forecourt, Apsu. | Green paste—C 20 |
| 6. Lady of the house, Hentsenu. | Green—S 30 |
| 7. Ka-Hather-hetep (Sacred bark). | Amazonite—H 17 |
| 8. Kama, may the excellent <i>ka</i> flourish. | Amethyst—C 4 |
| 9. Scribe of the nomes, Kheper-ka. | Rich blue paste—C 32 |
| 10. Scribe Khu-hez. | Green chalcedony—C 42 |
| 11. Intendant of the measured land, Mentu-hetep. | Blue green—S 25 |
| 12. Pepy-nefer-onkh, flourish the power of the <i>ka</i> . | Amethyst—C 78 |
| 13. Royal sealer, peer, intendant of the seal Peremuah. | Dark green—T 37 |
| 14. Mayor in the South Council of thirty, Ptah-hetep. | Blue green—H 41 |
| 15. Keeper of the brewery, Sā-Hather. | Green—S 30 |
| 16. Baker of Amen, Sā-Rerti. | Dark green pot—S 60 |
| 17. Scribe over the <i>khennu</i> of the Treasury, Sebek-user. | Blue paste—M 43 |
| 18. Deputy under the king, Samyota. | Green blue—S 25 |
| 19. Uah-en-nefer-ka. | Carnelian—H 68 |
| 20. Keeper of the office of the Controller, Ur-neb. | Blue green—S 25 |
| 21. Ra the excellent, praised, stable, and living every day. | Obsidian—H 79 |
| 22. Thy praise is an excellent declamation. | Amethyst—C 40 |
| 23. Ast-sa-hems (Isis protects her servant). | In gold ring, amethyst—L 45 |
| 24. <i>Khennu uab IV</i> . (Four-fold pure temple.) | Quartz crystal—L 50 |
| 25. <i>Zed onkh uazui</i> . | Green pot—T 6 |
| 26. <i>Neferu</i> in scrolls. | Blue green—S 25 |
| 27. <i>Hāti nefer, uzati neferti</i> . | Green—S 25 |
| 28. <i>Nub kheper</i> , etc., symmetric. | Blue green—D 32 |
| 29. <i>Uah ka uah</i> . | Green—T 5 |
| 30. <i>Kheper nub</i> , etc., between scrolls. | Dark green—D 74 |
| 31. <i>Nefer ka</i> in a ring of five spirals. | Amethyst—C 4 |



The type of the back is stated as numbered in *Scarabs and Cylinders* and in *Buttons and Scarabs*; three new types are drawn here below.

This group has an unusual proportion of the Uah epithets belonging to the IXth-Xth dynasties; one-third of all have the legs marked in feather pattern, while only one in fifty is the usual proportion among scarabs of this age.

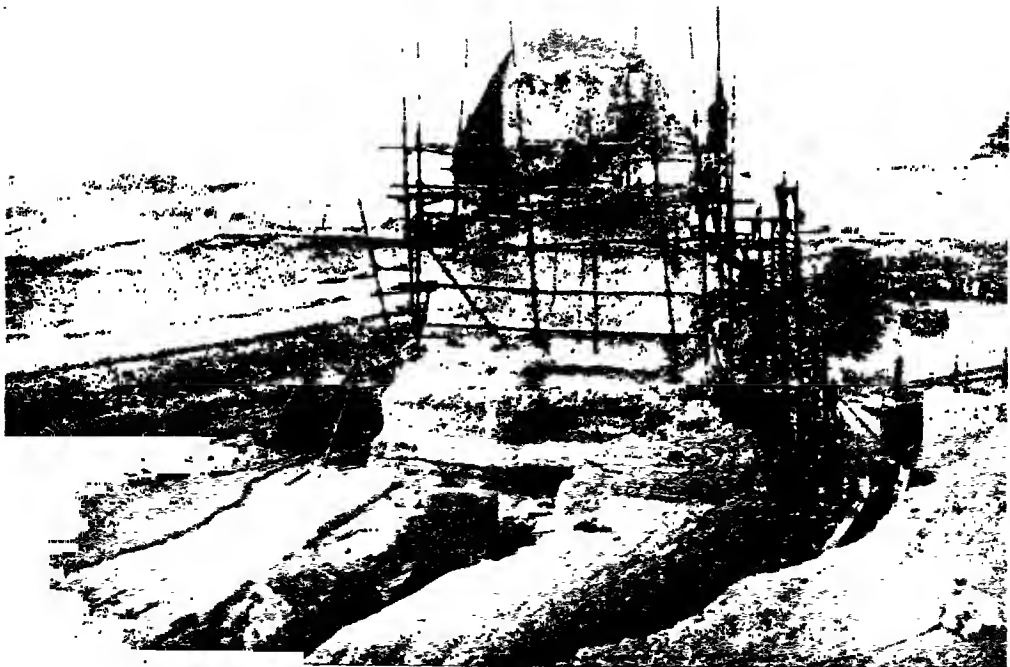
Below the scarabs is a black steatite cylinder seal of Pepy I. It is one of the well-known class bearing only titles of offices, without the names of

any officials. These seem as if intended to disallow any vested rights to offices. The left column is only a repeat; it begins:—"Royal noble, companion in the palace, officiating by command of his lord, the Horus Merytaui, Ramery, in the palace chief under the king, officiating by command of his lord." On what was formerly the blank side of it, there has been cut in a column of figures of a barbarous kind like those on the buttons of this age. This suggests that the cylinder belonged to one of the Syrian guard, who added signs of his own choice. At the top is what may be copied from two uraei, inverted. Next are two apes seated facing, with tails curling back. Below, three horizontal bars, three vertical, and three horizontal. Below is a man walking with a stick, followed by another, holding perhaps a form of throwing-knife. After an unintelligible group is an inverted group of three men walking, two outer ones with upraised arms; a wavy line is in front, above, and behind the men. This reminds one of the group of men carrying the long serpent, in the tomb of Sety I, and might possibly be an attempt at such a piece of mythology. There is nothing here precisely like the buttons, except the seated apes, yet these figures seem to be due to the same people who made the button badges.

F. P.

REPAIRING THE SPHINX.

THE Sphinx is at present being cleared and repaired. This photograph shows the depth of rock-cutting around it, and the casing of small blocks remaining on the paws, as well as the stele of Tehutmes IV between the paws.



SUPPLIES AND DEFENCE.

Agriculture	1271-76	Officers	1380-89
Vineyard	1277-86	Troops.....	1390-1431
Cattle	1287-1308	Cavalry	1432-41
Provisions	1309-27	Stores	1442-56
Wine and beer	1328-35	Auxiliaries	1457-65
Butchery	1336-40	Forts	1466-73
Catering	1341-45	Ships	1474-1511
Table service.....	1346-51	Crews	1512-1540
Clothing	1354-79	Trading ships	1541-1550

THE agricultural department, and produce, was signified by a plough, with the low handles usual in early times. The intendant of the agriculture (1271) was a common title. There was an overseer of the barn of the new crop of increase, *renḫ*, the fresh growth referring to a new crop (1272). There was a stable for the ministry of agriculture (1275). The purpose of a messenger to the marsh men (1276) is hard to see.

The vineyards were specially managed in a "northern office of the Delta king's lake and vineyard" (1277), and by an intendant of the vineyard (*kar*) (1278). A vine-dresser is named as *kary*, with a ladder set up to reach the high bunches of grapes (1279). For the vintage there was an intendant of the agricultural men pressing grapes (1280), shewn by the man standing in a vat, as also in the "diwan of agriculture" (1281). The framed wine-press (*shesm*) and vat are the emblems of the vintage in the north-east, the north-west and Sais (1282). An expert of the cellar of wine jars appears (1283), as well as a keeper of the royal wine vats (1284), if we can identify these vessels with the vat in 1282. There was a regular official system in later times, with a scribe of the seat of the intendant in the office of wine (1285), and an overseer of the sealing by the tasters of wine (1286).

The taxing of cattle was an important part of the revenue. In the IInd dynasty the biennial cattle census was so well established that the calendar was counted by it, and we find an official was "sealer of horns every day," having to mark off the cattle as registered by winding a thread round the horn and sealing it (1287). In modern times, when the registrar of cattle comes round, it is surprising to see how many are sent out loose on the desert out of sight. In the title 1288 the goose *sā* seems to be used for the *sā* guard, properly written with the tethering rope or the amulet, "guard of cattle." A wider scope was that of the intendant of horns and hoofs, all cattle, large and small (1289). The registration *thentet* (1290-2) is formed from *tennu*, "to number," and we see a keeper, a leader, and the intendant of the house, of numbered cattle. In the Middle Kingdom and later a different term was used, *hasb*, to reckon, in 1293-4. There was a separate overseer over the bulls (1296) as they were slaughtered for food, and not registered permanently like the cows. A tribute of a thousand bulls each year was rendered by one nome, and the manager of it was the "leader of a thousand" (1297). Another special official was the intendant of the heifers, *nefertu* (1298). The cattle were tended by *merut* peasants (1299 and see 1129-32), and such were taxed (1133); probably they owned these cattle, though working

for wages, and without land, which belonged to the *rekhytu*. The branding of cattle by a keeper (lion for *ari*) is named (1309). The herdsmen, *neru*, were also closely looked after, as there was a scribe of the vezier over the herdsmen's houses (1301). In late times the vezier had a title "controller of all cattle" (1302). Sheep were controlled from the Ist dynasty (1303); the gazelles were herded (1304), and a curious title (1305) is the "intendant of the cattle and sheep of Shu, food for his father." The keeper of asses is noted in the XIIth dynasty (1306), and the messenger of the food (?) for the dogs (1307), as well as the intendant of the dogs' house or kennels (1308).

The registration of provisions began in the IInd dynasty (1309), and various officers of the house of provisions are in the Old Kingdom (1310-13), a "maker of food" (1314), later a keeper of the office of food, marked by lips (1315), who is represented preparing food. For bread there was the intendant of *bat* bread, tall conical loaves, and of *shens* bread (1316), the intendant of the diwan of the office of turn-over loaves (1317), and the overseer of *baš* bread office (1318-19).

The office of intendant of dates in the O.K. (1320), or the controller (1322), was a diwan in the Middle Kingdom (1321). The intendant of honey is named (1323), and of the lotus seed (1324) and the controller of vegetables, *semu* (1325). The potting of food is represented, with the title *mer sã*, intendant of preserving (1326), and also of *ho* flesh (1327); in the New Kingdom both the pictures and the jars show how salted meat, pounded meat paste, birds and fat were preserved in jars.

Wine and beer are constantly named in the early offerings, and we find a keeper of the office of wine in the office of dates (1328), and a bearer of jars of *mohert* drink (1329), probably named from the Syrian *moher* soldiers. The brewery carried on by women is mentioned in the IIIrd dynasty (1330), and servants in the office of beer (1331-2); later still is an administrator of the office (1333). The brewer, *ofti*, and palace intendant of the cellar have also left titles (1334-5).

The butchers are named (1336-9), and the slaughter-houses which were kept cool (1340-1). Vague titles are the servants of food (1342), and the keeper of goods entering (1343). Dealers were inspected by an overseer (1344), and an intendant of the dealers in fish, *neshemyt* (1345).

The serving of food was managed by the "royal scribe of the children's table" (1346) or the *onkh* of the chief's table (1347-9), an office perhaps so named as supplying the *onkhu* food, or viviers. There was also a scribe of the table of the wine office, shewing that so important a place was well looked after (1351). The intendant of ointment, *merhet*, seems named in (1352) though the name is re-arranged. In 1353 there is the intendant of *gã*, and *gaut* is the word for a basket or frail, with determinative of a matting bundle rolled and tied up; the tying seems inherent in the sign as it is used for binding; the meaning is probably the bound-up mats of dates, as they were sent in from the oases in bundles like the determinative. This title refers, then, to the dates of Psamthek. The intendant of all the flax, *hemo*, of the king is named in the IIIrd dynasty (1354), and the house of flax is also named in the Old Kingdom (E.E. 248, Peher-nefer).

Clothing is a large official subject. The *opr* (1355-59) was apparently a fringed waist cloth, and belongs to the Old Kingdom; there were scribes, intendants, and controllers of it, and it was worn by the king. A linen tunic seems represented in 1360. The object in 1361-2 looks like the long tunic with sleeves, the modern *galabiyeh*, which has been found in the Vth dynasty (*Deshasheh* 31, XXXV). It was provided for the recruits. The other sign for clothing,

1271	ᠰᠠᠨᠠᠭ	IV PG. VIIA	ᠰᠠᠨᠠᠭ	1311	ᠰᠠᠨᠠᠭ	
1272	ᠰᠠᠨᠠᠭ	F 2578	ᠰᠠᠨᠠᠭ	1312	ᠰᠠᠨᠠᠭ	V LD II 43cd
1273	ᠰᠠᠨᠠᠭ	BERL 1397	ᠰᠠᠨᠠᠭ	1313	ᠰᠠᠨᠠᠭ	V LD II 48
1274	ᠰᠠᠨᠠᠭ	P. A6.	N. N.	1314	ᠰᠠᠨᠠᠭ	IV M. M. D. 12
1275	ᠰᠠᠨᠠᠭ	B. M. 675	ᠰᠠᠨᠠᠭ	1315	ᠰᠠᠨᠠᠭ	XII N. B. H. I. 45
1276	ᠰᠠᠨᠠᠭ	RO BA 224	N. N.	1316	ᠰᠠᠨᠠᠭ	M. K. C. 20025
1277	ᠰᠠᠨᠠᠭ	II RT II, XXIII 196	N. N.	1317	ᠰᠠᠨᠠᠭ	T 1629
1278	ᠰᠠᠨᠠᠭ	VI MEIR IV, ix	ᠰᠠᠨᠠᠭ	1318	ᠰᠠᠨᠠᠭ	PTOL. AS XVII, 92
1279	ᠰᠠᠨᠠᠭ	XII N. B. H. I, XXXV	ᠰᠠᠨᠠᠭ	1319	ᠰᠠᠨᠠᠭ	PTOL. AS XVII 92
1280	ᠰᠠᠨᠠᠭ	E. E. 248	ᠰᠠᠨᠠᠭ	1320	ᠰᠠᠨᠠᠭ	IV-V LD II 95a
1281	ᠰᠠᠨᠠᠭ	E. E. 248	ᠰᠠᠨᠠᠭ	1321	ᠰᠠᠨᠠᠭ	XII P. S. 77
1282	ᠰᠠᠨᠠᠭ	I RT I, XXIII, 37	ᠰᠠᠨᠠᠭ	1322	ᠰᠠᠨᠠᠭ	E. E. 245
1283	ᠰᠠᠨᠠᠭ	I RT I, XXI, 29	N. N.	1323	ᠰᠠᠨᠠᠭ	VI AS XV, 210
1284	ᠰᠠᠨᠠᠭ	M. K. C. 20186	ᠰᠠᠨᠠᠭ	1324	ᠰᠠᠨᠠᠭ	II RT II, XXI, 171
1285	ᠰᠠᠨᠠᠭ	B. M.	ᠰᠠᠨᠠᠭ	1325	ᠰᠠᠨᠠᠭ	IV M. M. C. 23
1286	ᠰᠠᠨᠠᠭ	RO BA 225	ᠰᠠᠨᠠᠭ	1326	ᠰᠠᠨᠠᠭ	XII N. B. H. I, XIX
1287	ᠰᠠᠨᠠᠭ	II RT II, XXII, 185	N. N.	1327	ᠰᠠᠨᠠᠭ	M. K. C. 20273
1288	ᠰᠠᠨᠠᠭ	III S. M. I.	ᠰᠠᠨᠠᠭ	1328	ᠰᠠᠨᠠᠭ	M. K. C. 20718
1289	ᠰᠠᠨᠠᠭ	VIII P. D. XI	ᠰᠠᠨᠠᠭ	1329	ᠰᠠᠨᠠᠭ	XVIII LR 170
1290	ᠰᠠᠨᠠᠭ	VII P. D. VIII	ᠰᠠᠨᠠᠭ	1330	ᠰᠠᠨᠠᠭ	III S. M. I.
1291	ᠰᠠᠨᠠᠭ	BN 113	ᠰᠠᠨᠠᠭ	1331	ᠰᠠᠨᠠᠭ	M. K. C. 20598
1292	ᠰᠠᠨᠠᠭ	M. K. C. 20186	ᠰᠠᠨᠠᠭ	1332	ᠰᠠᠨᠠᠭ	S. U. II, 188
1293	ᠰᠠᠨᠠᠭ	XI B. M. 133	ᠰᠠᠨᠠᠭ	1333	ᠰᠠᠨᠠᠭ	E. Y. 49
1294	ᠰᠠᠨᠠᠭ	P. S. 286	ᠰᠠᠨᠠᠭ	1334	ᠰᠠᠨᠠᠭ	XII N. B. H. I. 45
1295	ᠰᠠᠨᠠᠭ	XI T. C. XXIV	ᠰᠠᠨᠠᠭ	1335	ᠰᠠᠨᠠᠭ	O. K. M. M. D. 47
1296	ᠰᠠᠨᠠᠭ	EL KAB 6	L 572	1336	ᠰᠠᠨᠠᠭ	RO. BA. 225
1297	ᠰᠠᠨᠠᠭ	XII N. B. H. I, 48	ᠰᠠᠨᠠᠭ	1337	ᠰᠠᠨᠠᠭ	B. M.
1298	ᠰᠠᠨᠠᠭ	XVIII A. S. XIX, 150	ᠰᠠᠨᠠᠭ	1338	ᠰᠠᠨᠠᠭ	S. U. II 176
1299	ᠰᠠᠨᠠᠭ	A. S. XIII, 236	ᠰᠠᠨᠠᠭ	1339	ᠰᠠᠨᠠᠭ	A. S. XVII, 31-2
1300	ᠰᠠᠨᠠᠭ	A. S. XVII, 92	N. N.	1340	ᠰᠠᠨᠠᠭ	M. M. D. 25
1301	ᠰᠠᠨᠠᠭ	PTOLA. S. XVII, 90	ᠰᠠᠨᠠᠭ	1341	ᠰᠠᠨᠠᠭ	O. K. S. U. I 33
1302	ᠰᠠᠨᠠᠭ	XIX P. S. ED. LXXI	ᠰᠠᠨᠠᠭ	1342	ᠰᠠᠨᠠᠭ	O. K. A. S. XVI, 204
1303	ᠰᠠᠨᠠᠭ	I RT II, XV, 111	N. N.	1343	ᠰᠠᠨᠠᠭ	M. K. C. 20418
1304	ᠰᠠᠨᠠᠭ	XII N. B. H. I, XXX	N. N.	1344	ᠰᠠᠨᠠᠭ	XVIII LR 263
1305	ᠰᠠᠨᠠᠭ	A. S. XII, 281	ᠰᠠᠨᠠᠭ	1345	ᠰᠠᠨᠠᠭ	XVIII LR 20
1306	ᠰᠠᠨᠠᠭ	N. B. H. I, XXX	ᠰᠠᠨᠠᠭ	1346	ᠰᠠᠨᠠᠭ	V. 55
1307	ᠰᠠᠨᠠᠭ	M. K. C. 20613	ᠰᠠᠨᠠᠭ	1347	ᠰᠠᠨᠠᠭ	M. K. C. 20282
1308	ᠰᠠᠨᠠᠭ	T. VASE 3228	ᠰᠠᠨᠠᠭ	1348	ᠰᠠᠨᠠᠭ	M. K. C. 20319
1309	ᠰᠠᠨᠠᠭ	II RT II, XXI 165	N. N.	1349	ᠰᠠᠨᠠᠭ	M. K. C. 20333
1310	ᠰᠠᠨᠠᠭ	III LD II 5	ᠰᠠᠨᠠᠭ	1350	ᠰᠠᠨᠠᠭ	XVIII Q. 286
				1351	ᠰᠠᠨᠠᠭ	B. M.

divided below, in 1363-6, appears in early examples to be a thread subdivided to show the number of strands, as proving the quality of cloth. The office of serving out clothing is named in 1364, and the scribe of conformable or suitable clothing in 1366; the latter seems like a uniform, and as the linen was stored

from royal weavers, and served out, it is probable that a special make would distinguish royal servants. A special stuff was made for the king called the exact or perfect, *temt*, (1368). The Greek accounts state the Egyptians to have been very cleanly, and the scenes of clothes washing among domestic duties agree with this. Accordingly there are six different titles about washing linen (1369-74), including a palace expert intendant of washing *sesher* (1371), and a secretary of the washers (1374). Special kinds of clothing are noted, as the office of bright red linen, *da ans* (1375), the sack for clothes (1376), the embroiderer or weaver, *sesheni* (1377), the overseer of making fine linen (1378). The office of great counter, *api ur*, might refer to any branch of store-keeping (1379).

Of the professions, the military was the highest in Egypt. In the Ist dynasty there was a "leader, intendant of troops" (1380); this intendant of troops is generally rendered as general, and such is the obvious equivalent. The *mashou* troops are here spelled at full length (1381-2), and continue thus till the Vth dynasty, but are later only written by the determinative. The word is familiar in Arabic, "walkers" applied to foot soldiers, yet is not in Hebrew or Palmyrene; the other name for troops, *menfi* (1391-4), is similarly unknown, probably a garrison (*see* below). In the Vth dynasty there is a general of recruits, *neferu* (1382). In later times a great general, head one of his majesty is named (1383), and others of the south and north, or of the whole land. Such titles refer to the territorial army which was belonging to different regions (1384-5). Other such titles are "great leader of troops of Egypt," and general of the king in Nubia (1386-7). There is named a general of the local troops in the XVIth nome, Hibiū (1388), also of local troops in the temple of Sety at Abydos (1389).

The troops of the Libyans, wearing the feather, are named in 1390. The *menfi*, I would suggest, are the "exiled," or a standing army moved away for distant garrisons, unlike the troops settled in their own districts. There are four titles concerning them (1391-4), the last of which is peculiar as having the title *kherp* or controller, and there is also a controller of the *serq* troop, from *serq* to open, apparently skirmishers to open the way (1395-6). The *qen* were special "braves," who seem to have been organized as "storm troops," with an "orderer over those under the leader of the *qenyti*" (1397-8). The *menhytu* were the youths, recruits, for whom there was a "scribe of the recruits of the army" (1399).

Special men have the titles "Smiter of the enemy" (1400), "Subduer of lands for the king by orders of Horus of the palace" (1401), "keeper of troops" (lion=*ari*, 1402), "great fighter" (1403), chief administrator of troops (1404), or leader of all the troops (1405).

The archers were always a special body, usually Libyans, and regarded as so typically foreign that a usual title of a king was "trampling on the nine bows," and bows were usually figured on the footstool or pathway in the palace. The title of chief archer is never *mer* or *hati* as for other troops, but always *her*, over (1406). The archers of Nubia (1407) were probably from there, as the Egyptian does not seem to have recruited only for Nubia. An interesting title is 1408, "the chief archer of the ship for transport of washed gold," showing that a special treasure-vessel, with safe storage, was employed to bring down the Nubian gold, under guard. This also shows that the Nubian gold was probably stream gold, and not mined as by the Romans. A messenger of Nubia is named (1409).

The *thesu*, or troops bound in a company, were archers (1410-11). A peculiar title is "the *sakaru* who is for leading them" (1412); this is Semitic, as most of the military terms, *sakaru*, "hired," a *condottière* leader, like the Karian and Spartan

- 1352 𐎔𐎕𐎗𐎕𐎗 V M.M.D. 53 𐎔𐎕𐎗𐎕𐎗
 1353 𐎔𐎕𐎗𐎕𐎗 B.M.
 1354 𐎔𐎕𐎗𐎕𐎗 L.D. II 5 𐎔𐎕𐎗𐎕𐎗
 1355 𐎔𐎕𐎗𐎕𐎗 OK. M.M.D. 36 𐎔𐎕𐎗𐎕𐎗
 1356 𐎔𐎕𐎗𐎕𐎗 A.S. XVI, 199
 1357 𐎔𐎕𐎗𐎕𐎗 OK. M.M.D. 39 𐎔𐎕𐎗𐎕𐎗
 1358 𐎔𐎕𐎗𐎕𐎗 IV M.M.B. 1 𐎔𐎕𐎗𐎕𐎗
 1359 𐎔𐎕𐎗𐎕𐎗 L.N. 43 𐎔𐎕𐎗𐎕𐎗
 1360 𐎔𐎕𐎗𐎕𐎗 IV-V L.D. II 85a 𐎔𐎕𐎗𐎕𐎗
 1361 𐎔𐎕𐎗𐎕𐎗 III P.M. ix 𐎔𐎕𐎗𐎕𐎗
 1362 𐎔𐎕𐎗𐎕𐎗 IV-V L.D. II 93c 𐎔𐎕𐎗𐎕𐎗
 1363 𐎔𐎕𐎗𐎕𐎗 B.A. 222 N.N.
 1364 𐎔𐎕𐎗𐎕𐎗 B.A. 222 N.N.
 1365 𐎔𐎕𐎗𐎕𐎗 OK. A.S. XVII, 92 𐎔𐎕𐎗𐎕𐎗
 1366 𐎔𐎕𐎗𐎕𐎗 XVIII V. 53 𐎔𐎕𐎗𐎕𐎗
 1367 𐎔𐎕𐎗𐎕𐎗
 1368 𐎔𐎕𐎗𐎕𐎗 M.M.D. 6 𐎔𐎕𐎗𐎕𐎗
 1369 𐎔𐎕𐎗𐎕𐎗 VI D.G. II, 4 𐎔𐎕𐎗𐎕𐎗
 1370 𐎔𐎕𐎗𐎕𐎗 M.M.D. 6 𐎔𐎕𐎗𐎕𐎗
 1371 𐎔𐎕𐎗𐎕𐎗 V P.R. 38 (944) 𐎔𐎕𐎗𐎕𐎗
 1372 𐎔𐎕𐎗𐎕𐎗 B.M.
 1373 𐎔𐎕𐎗𐎕𐎗 V L.D. II 75 𐎔𐎕𐎗𐎕𐎗
 1374 𐎔𐎕𐎗𐎕𐎗 V. 77 𐎔𐎕𐎗𐎕𐎗
 1375 𐎔𐎕𐎗𐎕𐎗 L. 14 𐎔𐎕𐎗𐎕𐎗
 1376 𐎔𐎕𐎗𐎕𐎗 IV L.D. II, 226 𐎔𐎕𐎗𐎕𐎗
 1377 𐎔𐎕𐎗𐎕𐎗 OK. A.S. XVII, 204 𐎔𐎕𐎗𐎕𐎗
 1378 𐎔𐎕𐎗𐎕𐎗 G.W.T. 115 𐎔𐎕𐎗𐎕𐎗
 1379 𐎔𐎕𐎗𐎕𐎗 A.S. V, 103 𐎔𐎕𐎗𐎕𐎗
 1380 𐎔𐎕𐎗𐎕𐎗 I SIN 16 𐎔𐎕𐎗𐎕𐎗
 1381 𐎔𐎕𐎗𐎕𐎗 IV L.D. II, 19 𐎔𐎕𐎗𐎕𐎗
 1382 𐎔𐎕𐎗𐎕𐎗 V. L.D. II, 43 cd. 𐎔𐎕𐎗𐎕𐎗
 1383 𐎔𐎕𐎗𐎕𐎗 𐎔𐎕𐎗𐎕𐎗
 1384 𐎔𐎕𐎗𐎕𐎗 XXI WR 𐎔𐎕𐎗𐎕𐎗
 1385 𐎔𐎕𐎗𐎕𐎗 XXI WR 𐎔𐎕𐎗𐎕𐎗
 1386 𐎔𐎕𐎗𐎕𐎗 B.M. 826 SARC. 𐎔𐎕𐎗𐎕𐎗
 1387 𐎔𐎕𐎗𐎕𐎗 C.M. 78 𐎔𐎕𐎗𐎕𐎗
 1388 𐎔𐎕𐎗𐎕𐎗 N.B.H. I, 12 𐎔𐎕𐎗𐎕𐎗
 1389 𐎔𐎕𐎗𐎕𐎗 B.M. 573 𐎔𐎕𐎗𐎕𐎗
 1390 𐎔𐎕𐎗𐎕𐎗 XI M.D. 19 𐎔𐎕𐎗𐎕𐎗
 1391 𐎔𐎕𐎗𐎕𐎗 XII L.D. II, 138a 𐎔𐎕𐎗𐎕𐎗
 1392 𐎔𐎕𐎗𐎕𐎗 XXII P.H. N.N.
 1393 𐎔𐎕𐎗𐎕𐎗 XVIII, L.R. 253 𐎔𐎕𐎗𐎕𐎗
 1394 𐎔𐎕𐎗𐎕𐎗 P.S. 277 N.N.
 1395 𐎔𐎕𐎗𐎕𐎗
 1396 𐎔𐎕𐎗𐎕𐎗 VI Q.S. 106.12 𐎔𐎕𐎗𐎕𐎗
 1397 𐎔𐎕𐎗𐎕𐎗 B.A. 234 N.N.
 1398 𐎔𐎕𐎗𐎕𐎗 B.A. 234 N.N.
 1399 𐎔𐎕𐎗𐎕𐎗 A.S. VII, 34 𐎔𐎕𐎗𐎕𐎗
 1400 𐎔𐎕𐎗𐎕𐎗 M.K. C. 20283 𐎔𐎕𐎗𐎕𐎗
 1401 𐎔𐎕𐎗𐎕𐎗 M.K. C. 20278 𐎔𐎕𐎗𐎕𐎗
 1402 𐎔𐎕𐎗𐎕𐎗 PTOL. A.S. XVII, 2 𐎔𐎕𐎗𐎕𐎗
 1403 𐎔𐎕𐎗𐎕𐎗 XXVI 𐎔𐎕𐎗𐎕𐎗
 1404 𐎔𐎕𐎗𐎕𐎗 RAMESSEUM
 1405 𐎔𐎕𐎗𐎕𐎗 A.S. VII, 236 𐎔𐎕𐎗𐎕𐎗
 1406 𐎔𐎕𐎗𐎕𐎗 XIX, ZAS. III, 2y 𐎔𐎕𐎗𐎕𐎗
 1407 𐎔𐎕𐎗𐎕𐎗 P.J. V, 3 𐎔𐎕𐎗𐎕𐎗
 1408 𐎔𐎕𐎗𐎕𐎗 B.A. 242
 1409 𐎔𐎕𐎗𐎕𐎗 S.U. II, 260 𐎔𐎕𐎗𐎕𐎗
 1410 𐎔𐎕𐎗𐎕𐎗 XVIII A.S. XIV, 30 𐎔𐎕𐎗𐎕𐎗
 1411 𐎔𐎕𐎗𐎕𐎗 XXV BARKAL 𐎔𐎕𐎗𐎕𐎗
 1412 𐎔𐎕𐎗𐎕𐎗 B.A. 253 N.N.
 1413 𐎔𐎕𐎗𐎕𐎗 A.S. XVII, 29 𐎔𐎕𐎗𐎕𐎗
 1414 𐎔𐎕𐎗𐎕𐎗
 1415 𐎔𐎕𐎗𐎕𐎗 B.A. 237 N.N.
 1416 𐎔𐎕𐎗𐎕𐎗 C. L. 360 𐎔𐎕𐎗𐎕𐎗
 1417 𐎔𐎕𐎗𐎕𐎗 XVIII P.S. CONE 46 𐎔𐎕𐎗𐎕𐎗
 1418 𐎔𐎕𐎗𐎕𐎗 B.A. 233 N.N.
 1419 𐎔𐎕𐎗𐎕𐎗 A.S. III 204 𐎔𐎕𐎗𐎕𐎗
 1420 𐎔𐎕𐎗𐎕𐎗 A.S. IV, 99 𐎔𐎕𐎗𐎕𐎗
 1421 𐎔𐎕𐎗𐎕𐎗 OK. L.N. 34, B.A. 253 𐎔𐎕𐎗𐎕𐎗
 1422 𐎔𐎕𐎗𐎕𐎗 XX B.A. 229 N.N.
 1423 𐎔𐎕𐎗𐎕𐎗 " " " "
 1424 𐎔𐎕𐎗𐎕𐎗 XXVI REC. XXI, 67 𐎔𐎕𐎗𐎕𐎗
 1425 𐎔𐎕𐎗𐎕𐎗 XX B.A. 229 N.N.
 1426 𐎔𐎕𐎗𐎕𐎗 ?
 1427 𐎔𐎕𐎗𐎕𐎗 P.B. 𐎔𐎕𐎗𐎕𐎗
 1428 𐎔𐎕𐎗𐎕𐎗 IV. L.D. II, 97a 𐎔𐎕𐎗𐎕𐎗
 1429 𐎔𐎕𐎗𐎕𐎗 SIN 86 𐎔𐎕𐎗𐎕𐎗
 1430 𐎔𐎕𐎗𐎕𐎗 B.A. 233 N.N.
 1431 𐎔𐎕𐎗𐎕𐎗 III P.M. XVI 𐎔𐎕𐎗𐎕𐎗

generals which are recorded. Probably also foreign, is a "leader of those troops of the whole of Egypt" (1413). The *Kelosher* are the kalasires named by Herodotus (1414), who were settled in Upper Egypt and the Eastern Delta. They used swords (Her. ix, 32), and had plaited helmets, hollow shields with large rims, pikes and large hatchets, when engaged at sea (Her. vii, 39). The *senti* (1415) are

the fighters in chariots (*see* 1439). The falchion was an Asiatic weapon, and once there is head falchioner (1416). The *nennu* (1417) were the "goers" light-armed troops. The *anoyt* (1418) were apparently a high class of troops, as they had a fan or ensign bearer. The *sāu* were guards, perhaps police or watchmen, written with the tether rope (1419-20) or the amulet: there was an intendant over them for the south, perhaps the frontier, and for a nome.

The *nuu* (1421), otherwise *uou*, was an under officer, meaning apparently one in sole charge. Scribes are named of the troop, *sehui*, of the soldiers (1422), of the auditor of soldiers (1423), and of soldiers in general (1424). There was an overseer of messengers of soldiers (1425), and a fan or ensign bearer (1426).

Of special troops, there were the strong ones *nekhiti* (1427), and the controller, of *neferu* recruits (1428), the house of the mighty of the powerful recruits (1429), this great one (or warden) of *lunāu* (1430), which seems as if from לָקן "abide" or "dwell," meaning garrison troops. Recruits, or lads, were sometimes brought up, and hence "known," in the palace (1431).

The cavalry was a very important arm in the New Kingdom, when fighting the Syrians who were well horsed. A commander is called the exalted one of horses (1432), a title unknown elsewhere, referring to riding, which was introduced later than chariot driving. The word *sesem* or *sesmet* seems to be earlier than *semsem* for a horse. *Sus* is the Hebrew form, like the Arabic *sisi*; *sesmet* then were mares (*met* mother), and *sem sem* is an ignorant corruption. A different word *hetera* was used for a draught animal, ox, or horse. The administrator of that which is of horses (1437), refers to the harness. The charioteer, *kathena* קַתְנָה, captain, of the chariot was the driver of *ta hetera*, the horses (1438), and the fighter, *senni*, is named separately in 1439; this is literally *seni* Hebrew, the second, but it might be a primitive Semitism of *sen*, "brother," Egyptian. The stabling was managed by one "over the stable" (1440), or "over the stable of the palace stable" (1441).

The stores of weapons were usually in charge of a controller or keeper. The controller of bows is clearly indicated by the ends of two strung bows projecting from the case (1442): the word *temā* seems unknown elsewhere for a bow or archer, but it may be connected with *themā*, brave, as an epithet of the Libyan archers, and if *temā* is accepted as the word for a bow, it explains the Temehu, Libyan, as *temā hāu* "people of the bow." The sign in 1443 has been explained as a bow-case (ANCIENT EGYPT, 1921, 35). The keeper of the bows is named in 1444-5. The leader of the bows (1446) may rather refer to the archers, as in 1405. In Sinai is the title "over the bows of the Lord of the Menti," Arabs of Sinai. A garrison title is "warden of the corner of the city (corner tower?) of the palace archers" (1448). The house of the khepesh was the name of the factory of arms (1449). There was also a store of weapons, "the house of fighting, bows and arrows, and registry of the ensigns" (1450), and an "intendant of weapons" (1451). The clothing of the recruits was kept by a controller, and there was also a clothier of the naval recruits (1452-3). The intendant and keeper of chariots, *urrit*, are named in 1454-6.

The garrison was *mennu*, the "fortress" people, or "permanent" body (1457). The sharpshooters were the *seti* named by Piankhy (1458). The auxiliaries were various border tribes who had been incorporated in the army, like Germans in the Roman army, where German guards appeared within a generation of the conquests in Germany. There were the *Mohāiry* (1459-60) or light-armed troops, from מְהַר to hasten, who were brought in by the XIXth

dynasty; the *Mozāy*, named from מוצי, to find out, who scouted, and were much used as police in Egypt (1461-2); the *Nehesy* or negroes (1463); and the *Shasha-mo* (1464), probably the Mashauasha or Libyans, as their name was often abbreviated to Mo, and might be sarcastically inverted as Shasha-mo, "the abject Mo." The common name for a chief in Syria was Meryna (1465) or "Our Lord," *mar-na*, which was the name of the god of Gaza.

The camp of the king was under the *mer mokhen ne nesut em nekhtu* (1466), or intendant of the tented place of the king in his strength: מנה, a tent, is familiar in the word *khan* for an inn. In the IIInd dynasty there was a director of the forts, the mace with a cord round it being a ruling title in early times (1467). There are various fitters of a fort, *qed*, who did all the carving and fitting up (1468-70). A usual name for a fort was *khetm*, the sealed or closed place (1471-2). There is also an overseer of the keeper of the *thärt* (1473), apparently a fortress; the name of Tartus, *thärtä*, shows it to be Syrian, apparently the same as *Thar* or *Thalu*, the frontier fortress.

1432	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	B.A. 237	N.N.	1453	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	VI L.D. II 115c	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕
1433	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	XIX P.SED. LXVIII	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1454	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	B.A. 237	N.N.
1434	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	XXII P.H.	N.N.	1455	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	AS XIV, 30	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕
1435	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	BIACH.		1456	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	BM.	
1436	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	L C. 82	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1457	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	L.D. II 23c	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕
1437	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	XIX P.SED. LXVIII	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1458	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	XXV BA. 234	N.N.
1438	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	XX B.A. 229	N.N.	1459	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	XXII P.H.	N.N.
1439	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	XXII P.H.	N.N.	1460	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	Ro BA. 223	N.N.
1440	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	XIX P.SED. LXXIV	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1461	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕		
1441	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	SETY II A. 5. XX, 139		1462	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	MUN. 19	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕
1442	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	III P.M. ix	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1463	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	BM 466	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕
1443	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	A. 5. IX, 89	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1464	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	BM.	
1444	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	A. K. C. 20436	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1465	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕		
1445	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	XIX B.B.E. 27	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1466	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	XXII P.H.	N.N.
1446	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	XXII A. 5. XX, 126	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1467	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	II R.T. II XXII, 193	N.N.
1447	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	A. 5. XX 162	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1468	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	VI L.D. II, 115c	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕
1448	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	A. 5. XI, 142	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1469	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	IV P.G. VII A	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕
1449	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	IV L.D. II 152	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1470	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	IV P.G. VII A	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕
1450	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	V M.M.D. 19	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1471	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕		
1451	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	BM.		1472	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	A. 5. XIV 30	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕
1452	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	III P.M. ix	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	1473	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕	XXVI A. 5. XVII, 182	𐎔𐎕𐎗𐎕𐎗𐎕𐎗𐎕

The idea sometimes stated that the Egyptians were not familiar with shipping is entirely contradicted by the records. In any great tomb, large vessels are figured on the Nile, expeditions were several times made on a great scale down the Red Sea, gigantic vessels were framed for transport of obelisks, and the Nile was accepted as the only great road in the country. The titles show this same familiarity with shipping; there are thirty-five names for different kinds of ships and boats. These names have now all vanished, and the half dozen names now in use all differ from the old ones; the Copt has been forced to an indoor life, and the Arab has taken over the shipping. The names are given in the alphabetic order in the tabular list (1474-1511). The largest vessels were those

called after the Syrian trades, a Byblos ship (*kebnyt*, 1507), "a Taurus ship" (*tharta*, 1510), and a "Cilician" (*kefta*, 1508). Next were those used on the Red Sea, *mensha* (1488), *mer*, 1490 and *oot* (1476). The heavy boats on the Nile were the *oho* or *hou* (1478), also used for chopped straw held down by a net, as at present (*see* 1480), *usekht* (1482), the *sātho* (1502), and the *qār* (1408), 1505. The *amemu* (1474) was a guard-boat for soldiers, the *mok* (1487) for grain.

The *sehery* (1501) was a dahabiyeh, and the *mokhen* (1486), *khent* (1497), *qāqā* (1504) were light passenger boats. There were several names of sacred boats only used ceremonially, *atepa* (1475), *bak* (1485), *neshem* (1495), *kher* (1498), *sant* (1499), and *seshem* (1503). The great mythical sunboats were the *monzet*, for dawn (1439), and the evening boat *mesktet* (1492). The remaining quarter of the names belong to common sizes, the purpose of which we cannot yet distinguish.

Various titles of command over ships are found, overseer of the sailors (1512); the head of the boats of the heart of Ra (1513), brings to mind the water of Ra, the canal which ran past Heliopolis to Wady Tumilat; were the boats in the midst of Ra on this canal? Controllers and intendants were usual (1514-15), and there was a leader for the procession of the sacred boat (1516). The expert of boats (1517) was probably over the repairs. The management of the sailors depended on the lieutenant or one in sole charge of the sailors (*khenu*) (1518), the head over the sailors (1519), the ganger of the sailors (1520), the general of the sailors (1521), there was also the scribe of the sailors (1522), and the plain name of sailor (1523); these were all rowers, but there was a more definite handling of sails by the *nefu* (1524). The men, *sā*, of the sacred boat were probably porters, as well as the *hemu* (1525-6).

The pilot was *am mert*, in the eyes of the boat, standing between the two eyes painted on the bows (1527). There was also the "keeper of the front" (1528), as a look-out man. The steersman was the "keeper of sitting," as from prehistoric days he squatted on the stern, holding the long steering oar (*Hierakonpolis* LXXVII). The pilots, *det*, were registered (1530), implying that they were examined as to competence. The word *opt*, "to equip" occurs in several titles; in Sinai it only belongs to the chief boatmen, and means the equipping of the boats, and not the sailors; Brugsch translates it sailors (B.A., 252), but if in some cases it refers to the crew that may be as part of the equipment, *see* 1531. The boat equipper, 1532, is in Sinai, and there are titles of intendant of the equipments of great ships and of the king's ships (1533-4). There were artisans, ship's carpenters (1535), and messengers, or cabin boys (1536). Also a scribe at the side of the ship, to register what went in and out (1537), and "headman of the sides of the ship, keeper of its things that fall in the water," a man to keep watch on anything falling overboard (1538). There was an intendant of the ships of the harem of the palace, and of the ship of the palace of Tahutmes III (1539-40). The sealed chamber on a ship (1541) must be the strong-room for valuables.

An important commercial post must have been the "secretary of accounts of the Byblos-ship in (faring) as far as Punt," in the VIth dynasty (1542). Another secretary was for the *oho* ships over its moorings (*hātetu*) (1543), registering the positions of the shipping. The keeper of the office of mayor of the dockyard, shows that there was a harbour-master, and there was an elder of the dockyard (1544-5). The boat-builder, or "maker of the *oot* boats" (1546), and the price *baku* for boats (1547) are named; also the merchants and traders who came to deal at the ships (1548-9), with their wares (1550).

FLINDERS PETRIE.

1474	1474	T. 18		1513	B M.
1475	1475	BA 254		1514	BA 260
1476	1476	SIN 23	4th	1515	XIII, MCA, 882
1477	1477	BA 250		1516	BA 260
1478	1478	P. C 77	4th	1517	BA 260
1479	1479	BM	1st	1518	XVIII B.M 493
1480	1480	BA 250	N N.	1519	XVIII LD II, 128
1481	1481			1520	BM 320
1482	1482	P 427		1521	LV. 10
1483	1483	VI P D II A	4th	1522	BM 320
1484	1484	BW 403	N.N	1523	SIN 137
1485	1485	XVIII C N. 105-6		1524	MK. C 20444
1486	1486			1525	BA 260
1487	1487	BW 576		1526	BA 252
1488	1488	BA 261, BDG 421	NN	1527	VI SIN VIII
1489	1489	SU II, 163		1528	BA 259
1490	1490	PTOL. PITHOM		1529	BA 259
1491	1491	SU II, 163		1530	V LD II 426
1492	1492	MAF, 1205	2nd	1531	MOND II 19 c
1493	1493	VI B.N E 138		1532	VI SIN 16
1494	1494	XVIII PSED Lii	4th	1533	IV LD II 97 a
1495	1495	DB PUNT		1534	AS XVIII 30
1496	1496	A.S.V 72	1st	1535	BA 253
1497	1497	BA 251		1536	MK C 20407
1498	1498			1537	VI P D V
1499	1499	MK 36, 22		1538	SU II 130
1500	1500	BA		1539	PS 134
1501	1501	SETNA		1540	RMH I, IV 202
1502	1502	BA 251	4th	1541	BA 254
1503	1503			1542	SU I 134 (899)
1504	1504	PP XXXI	2nd	1543	MMP 3 (1st)
1505	1505	RHAR. I. 78		1544	BA
1506	1506	LD III 172		1545	DM 532
1507	1507	BA 250 LD II 150 a		1546	XII BM 155
1508	1508	XIII- BA 250		1547	BA 253
1509	1509	V B.N.E. 138		1548	BA 261
1510	1510	BA 250		1549	BA 261
1511	1511	V B.N.E 138		1550	BA 253
1512	1512	BA 252			

EGYPTIAN WORKING DRAWINGS.

MANY years ago a petty dealer of Lahun brought me a roll of papyrus, broken across the middle and much shattered, which had been found at Gurob, almost certainly of the XVIIIth dynasty. Only a few stray lines could be seen, and no inscriptions, so it was readily passed to me. On damping it flat, and piecing the fragments, it proved to have been a roll 21·7 inches wide and over 60 inches long. It was divided into squares by red lines, and the working drawings were in black. These were of the front and side view of a wooden shrine, suspended in a naos framework, for being conveyed in processions. Where in the front view the inner shrine cornice would be hidden by the outer framework, the parts in front are of thicker line, and those behind are of thin line for distinction.

The side view gives the clearest rendering. At the top is the long roof of the framework, curved at the front end, where it bears a single uraeus. It is supported by two pillars, the back one the longer, the front one shorter, as being under the cornice: the capitals are double-bell shaped. These pillars run slanting down to the base-beam. At a lower level than the front cornice is seen another cornice, within the pillars, which is that supporting the roof of the shrine, also curved as above described. Below the cornice there is a framing, under which is the *pet* sign of heaven, to mark where the top of the decoration would come.

At both the top and the base there are two connections of twisted rope between the shrine and the framework. These seem plainly intended to sling the shrine from the top of the frame and to secure it from swaying by staying it to the base beam. The need of such slings shows that this was not to be carried by men, but to be drawn along on a sledge, like the great shrines in funeral processions.

The purpose of the curved top is now intelligible. If a heavy shrine was hung from a straight bar it would bend it down and so shorten the length, thereby straining the supporting framework. By curving the support, a strain would lengthen the frame; but by having it straight at one end and curved at the other the changes due to weight would be neutralised. Thus a form of spring was devised which could be fastened firmly at the ends while yielding freely to weights. The shape seems to have pleased the Egyptian, and it was copied for the firm lids of boxes and caskets. It was used at the end of the Vth dynasty (*see* Shedû in *Deshasheh*, XXV), but is rare or unknown earlier.

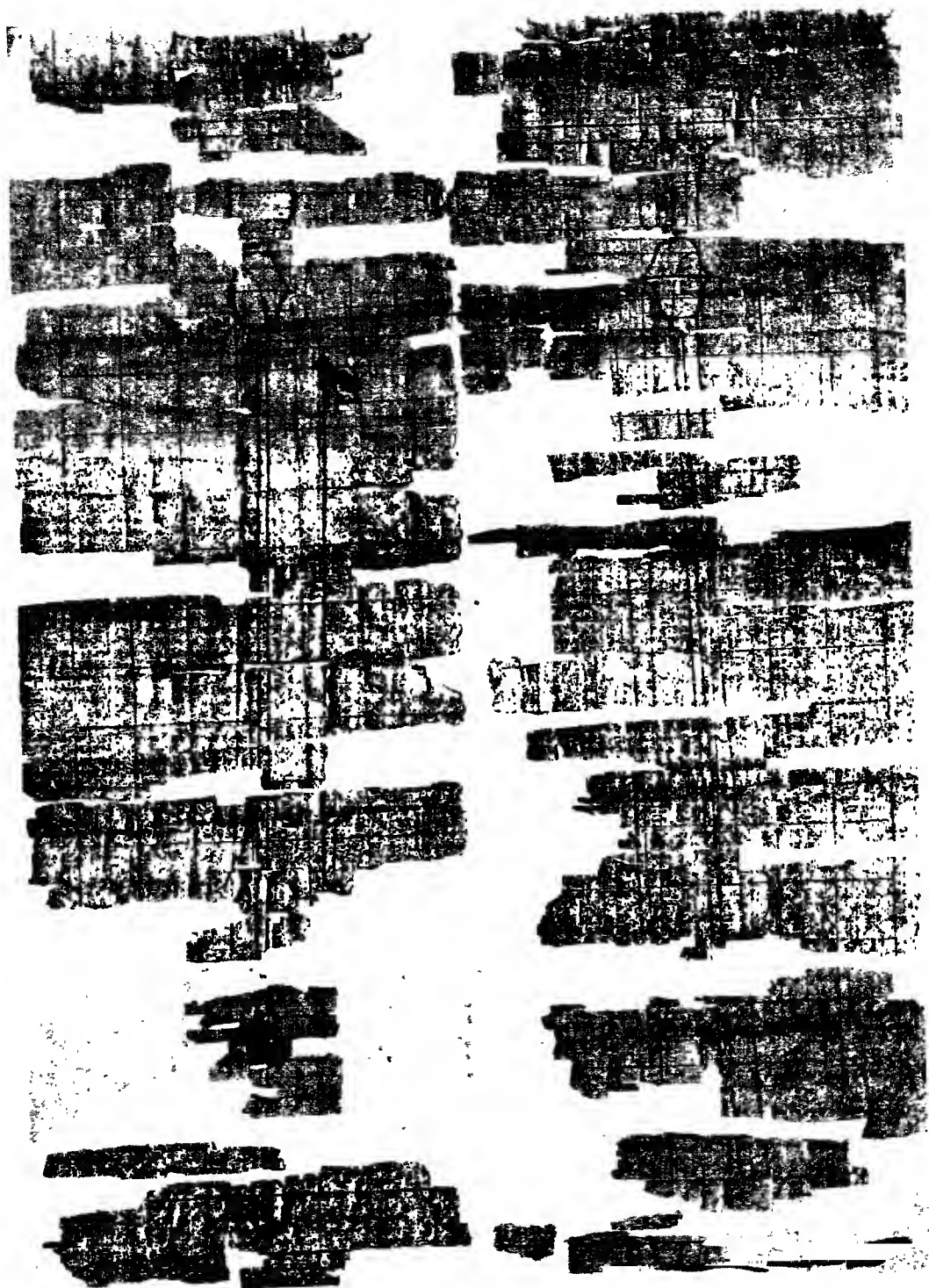
In the front view there is a disc and uraei in the middle of both cornices, and also on the lintel over the door. Half-way down the front there is a *pet* sign across it, marking the top of a scene. The opening of the shrine, then, only revealed the upper half of the figure within.



WORKING DRAWING OF SIDE VIEW OF SHRINE.

It might be supposed that regular squares were based on a unit of measure, though modern custom for divided note-books ignores units. The papyrus has been so much damaged that continuous measurement can only be of value on short unbroken portions. From eight of the best of these, the mean value is 1·3614 inches ; among slight variations in different parts some extend to a scale of 1·373. Certainly there would have been some contraction by age : the amount of such change is quite unknown, but it is hardly likely to exceed a hundredth. This size of square is not related to Egyptian measures, as there is no authority for dividing the cubit by 15, =1·375. It might be half of the Punic palm, an eighth of the foot ; the longest, or least contracted, portion here gives 1·373, which $\times 8 = 10\cdot98$ inches. The Punic foot varies from 11·08 to 11·17 (ANCIENT EGYPT, 1923, 34) ; so supposing a contraction of a hundredth it would just bring this originally to the size of the best example—that from the Byblos sarcophagus. On the whole this seems fairly probable. Why the Egyptian chose such a size was probably to make the squares fit actual measurements of the shrine. Such shrines usually appear as about the height of a man in the scenes, and this could not be very much smaller, or it would have been carried by hand, and not have needed slings to check vibration. The squares, then, would represent about 3 inches on the work, or the usual palm. The course of procedure seems to have been that the designer, knowing that a shrine 14 palms in width was needed, took the widest roll of papyrus and, being unable to get it into the width on half size, he took a smaller measure for his squares, using the Punic palm as the most convenient measure at hand. He then ruled up the roll with red lines, ticking off the scale with dots to begin with, and ruling between these end-marks. The accuracy was about equivalent to the nature of the drawing, having a mean error of division of one hundredth to one fortieth of an inch in different parts. These drawings are now at University College. There is no reason to suppose that this squared papyrus was exceptional; the town and temple at Gurob were of no importance, and there is not a word of writing or any figures on this to show that it was a special drawing. For once, we have a glimpse of the cabinet-maker's method of preparing working drawings on squared paper : this is as curiously like modern practice as the pyramid builders' use of facing planes for testing work. Our practical methods are very old.

FLINDERS PETRIE.



WORKING DRAWING OF FRONT VIEW OF SHRINE.

REVIEW.

Kings and Queens of Ancient Egypt. Portraits by WINIFRED BRUNTON. History by eminent Egyptologists. Large 8vo, 163 pp., 18 plates (14 in colour). (Hodder and Stoughton.)

Restoration is a dangerous affair, and it is therefore all the more valuable when it is successful, as in this book. The flood of mock Egyptian drawing which has confounded the public taste, even in specialist books, is here rebutted by the results of real knowledge and a most carefully checked intuition. This has given the world a truer view of the great monarchs than had been reached before. In search for expressing character, Mrs. Brunton has adopted rather a late age in some cases, where younger heads would have been more popular. It is cruel to show the prophet of beauty, Akhenaten, as in his last illness; Nefertyti has also passed from the exquisite firmness and tone of her bust into being a careful mother; Sety I, in the Abydos heads and the profile of his mummy, has a touch of the audacity of his son, and is less careworn than here. No doubt we see in the paintings one form of the truth, but other expressions might have given a brighter aspect.

Various authorities have written the character biographies which accompany the portraits. These are fairly exhaustive in giving a realization of the ruler, and will doubtless be accepted and quoted as describing the moving personalities of the early ages. It may be well to guard, then, against trifling inaccuracies. On p. 25 *erpati-hati-a* should be noted as a title in the IIIrd dynasty (*Medum XVI*); on p. 27 the greatest mass of granite work in the IVth dynasty should be remembered. Under Pepy I might also be noted his great series of cylinders with official titles but no names, issued in order to break the family claims to offices. Under Amenemhat III may be added the serpentine head in University College, closely like his Cairo statue; it seems impossible to identify with that the obsidian head, or a host of other heads rashly attributed. On pp. 84-5 Benert-mut (or Nezem-mut) should be named not as the aunt, but the sister-in-law, of Akhenaten, being the sister of Nefertyti; this increases the probability of her survival to the close of the dynasty. On pp. 95-8 there is no value given to the rays represented as acting, which were a new feature added to the sun worship, and which are a remarkable scientific expression. Thus there was a very essential difference from all the sun figures that were known before. The Aten hymn (p. 102) remains the prototype, and until an earlier form can be found of such poetry it must have the credit of originality. On p. 108 it is said that it is impossible to give any tangible meaning to *living in the truth*; this ignores all the art and new ideas of that time. Akhenaten's fanatical regard for the truth made him require to be sculptured kissing the queen when out for a drive, dancing her on his knee, and playing with their children in public. Surely this is sufficient token of living in the truth! The black Ramessu II of Turin is called kingly (p. 134), but earlier kings looked ahead impersonally at their duties, while Ramessu is smirking down at the spectator to see if he is impressed by such a fine fellow. Minute points may well be put right in such a work, which is so nearly all that could be wished as the realization of the mighty dead.

Syria. Tome VI, 2^{me} fascicule.

DUSSAUD, R.—*Dédicace d'une statue d'Osorkon I, par Eliba'al, roi de Byblos*. This is a half-length figure, and part of the base, cut in red quartzite; the work is not Egyptian, and though the cartouche on the chest and on the base is fairly cut, the dedication in Phoenician is scattered in vertical lines all over the surface, like the Assyrian inscriptions across their figures, but as no Egyptian would think of doing. As regards the forms of the letters, while eight agree most nearly to the XIIIth-century forms, five agree better to the IXth-century alphabet of Mesha. The translation is, "This statue is made by Eliba'al, King of Gebal, in consecration to Ba'alat-Gebal for himself. May she prolong the days of Eliba'al and his years of reign over Gebal." There is also a piece of a statue of Sheshenq I, with a dedication on the base, "offered by Abiba'al King of Gebal and the taxer of Gebal in Egypt to Ba'alat-Gebal and to Ba'al-Gebal." The "taxer" is *Negash*, otherwise "taskmaster" or "oppressor." The deputy of the king who managed the tribute seems probably intended. The portrait of Osorkon is so rare that we beg to copy it here.



In the *Bibliographie* is stated M. Montet's reading on the scimeter of Byblos, "The Prince of Kapni (Byblos) Yp-shemu-abi, renewing life, born of the Prince Abi-shemu deceased."


Proceedings of the Russian Academy. History of material Culture, 1924. *Ushabti and Sarcophagi in the Hermitage Museum*. F. F. Gess. Photographs and texts are here issued of (1) a wooden ushabti, in a model sarcophagus, of Tehutimes, a *nesut heh* on the sarcophagus, and part of the chapter on the ushabti. (2) Text of another wooden sarcophagus, for Tehutimes from his sister. (3) Another sarcophagus and ushabti for the same. (4) Model mummiform coffin of pottery with vertical band of the *sedm osh em ast māot Sen-nezem*, and cross bands of the four genii; enclosing a wooden ushabti with extract of the chapter. (5) Model mummiform sarcophagus of similar type for a royal scribe, intendant of the palace Huy. (6) A plain model sarcophagus.

Egyptian cylinders of the Golénichef Collection. N. D. Flittner. This gives drawings of fourteen cylinders, one of Pepy I, the other of archaic style, for which transcriptions are proposed.



Zeitschrift für Ägyptische Sprache. Vol. LX, 1925.

This volume is dedicated to Dr. Erman by his students and friends in honour of his seventieth birthday.

KEES, H.—*Zu den ägyptischen Mondsagen*. This article deals with the myths concerning the moon as one of the Eyes of the Sky-god, and with the moon-god Thoth. The religious terminology used in these myths is full of allusions to the mythology of other gods, particularly of Osiris, and reveals early and complicated

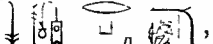
borrowing and interlacing. Herein lies the explanation of references, such as "the left shoulder of Osiris which is in Letopolis," whilst the key to the use of the symbol , "leg" for the moon is to be found in the equation of the "leg" in *ht sbk* with the body of Osiris in his character of moon-god.




RUSCH, A.—*Ein Osirisritual in den Pyramidentexten*. Scattered about in the Pyramid Texts the writer detects a ritual which was specially created for Osiris at the time of the spread of his cult. In the author's opinion, the most important part of his treatise consists in proving that, so early as the Vth dynasty, the scenes to which these texts served as litanies were actually performed at the festivals of the god to avenge and restore him to life.

BONNET, HANS.—*Zur Baugeschichte des Mentuhoteptempels*. The writer rejects Borchardt's view that Mentuhotep II (), whom he calls Mentuhotep III) built the pyramid and terrace of the XIth dynasty temple at Deir el-Bahri, and considers the whole structure to be the monument of Mentuhotep III only (), whom he calls Mentuhotep IV). Bonnet explains the anomalous character of the structure as an effort to combine the burial methods of the Theban dynasty with those of the Old Kingdom pyramid builders.

PIEPER, MAX.—*Die ägyptischen Skarabaen und ihre Nachbildungen in den Mittelmeerländern*. The article emphasises the desirability of a compilation of reliable and accessible reproductions of the most important finds of scarabs outside Egypt. A comparison of all the available specimens would show, for instance, whether the scarabs found in Greece of post-Mycenean and pre-Saite date were imported by the Phoenicians or were of local workmanship.

DAVIES, N. DE G.—*The Place of Audience in the Palace*. This article is a discussion of "the pictures of the window in the palace at which Akhnaton appears in public, and the interesting relation between architectural features and the depiction of them which this particular erection exemplifies."

SPIEGELBERG, W.—*Die Datierung des Berliner "Trauerreliefs"*. This relief depicts the funeral procession of a high-priest of Memphis. It was published and dealt with by Erman in *Zeitschrift*, XXXIII (1875) p. 18 ff., Pl. I. Erman dated the relief to the XIXth dynasty or end of the XVIIIth. In the dignified figure who comes after the sons and takes precedence of the other exalted mourners, Spiegelberg now recognises Horemheb before his accession. This identification is based on the title , and confirmed by the style.

SPIEGELBERG, W.—*Die neuägyptische Präposition m-dr "wegen."* The writer derives New Empire , *m-dr* and Boheiric *NTEN-* "because of" from , *m. dt* (literally "by the hand of") followed by the genitive *n*. He cannot, however, apply this explanation to the expression , *m.dy*, which is used in the same sense in New Empire (before nouns and pronouns) and in demotic (before pronouns only), and which corresponds to Coptic *NTA*.

GARDINER, A. H.—*The Autobiography of Rekhmerē*. In this paper Dr. Gardiner gives a restoration, with critical notes, of the sadly battered inscription published by Newberry in Pls. VII and VIII of *The Life of Rekhmara*. The inscription comprises forty-five lines of hieroglyphs which occupy the southern end wall of the tomb. Sethe's edition of this inscription (*Urk.* IV, 1071-85) depended upon Newberry. Dr. Gardiner's careful examination of the wall showed

that in a large number of cases where the actual sign has perished, the surrounding plaster has preserved the contours either entire or in part. "Of specific events in his career, Rekhmerē has recorded but one, namely, his promotion to the highest magistracy in the land," nevertheless the text "seems a good example of what the Egyptians considered that an autobiography should be. . . It abounds in unusual words and phrases."

RANKE, H.—*Tiernamen als Personennamen bei den Ägyptern*. Many personal names which appear to be the name of an animal are in reality abbreviations of phrases in which the animal represents the king or a god, e.g. *mꜥy* "lion" is short for *mꜥy. m. ḥꜥꜥ*, "the lion is the ruler." In the category, Names of Animals as Personal Names, the writer deals only with personal names in which the name of an animal is used as such. Some two dozen animals are represented in these names, which were, it is suggested, used in the first place as pet-names.

GRIFFITH, F. LL.—*Tomb Endowment in Ancient Egypt*. Professor Griffith notes an attempt in the Middle Kingdom to improve on the Old Kingdom practice by substituting a single *ka*-priest for several.

KEES, H.—*Grammatische Kleinigkeiten*. These consist of notes on the form of absolute pronoun used after the conjunctions $\left| \begin{smallmatrix} \text{—} \\ \text{—} \end{smallmatrix} \right|$ or $\left| \begin{smallmatrix} \text{—} \\ \text{—} \end{smallmatrix} \right| \begin{smallmatrix} \text{—} \\ \text{—} \end{smallmatrix}$, $\left| \begin{smallmatrix} \text{—} \\ \text{—} \end{smallmatrix} \right| \begin{smallmatrix} \text{—} \\ \text{—} \end{smallmatrix}$ or $\left| \begin{smallmatrix} \text{—} \\ \text{—} \end{smallmatrix} \right| \begin{smallmatrix} \text{—} \\ \text{—} \end{smallmatrix}$, and the emphatic particle $\left| \begin{smallmatrix} \text{—} \\ \text{—} \end{smallmatrix} \right| \begin{smallmatrix} \text{—} \\ \text{—} \end{smallmatrix}$, and on the use of the negative verb *im-* in verbal sentences with a *noun* as subject.

WILCKEN, ULRICH.—*Punt-Fahrten in der Ptolemäerzeit*. Berlin Pap. 5883+5853 is the earliest known document recording a mortgage on a ship. Wilcken dates it to the middle or first half of the IInd century B.C., and suggests Alexandria as its place of origin. The document concerns the loan of an unknown sum to five men by one Archippos for a voyage to *Aromatophoros* (*Punt*) for *ἀρωματα*. These men are bound to repay the loan within a stated period after their safe return. As a guarantee, five other persons go bail, giving as security their persons and their entire property, but the creditor has no claim on the ship or cargo, as he has in all other mortgages on ships which are known.

CRUM, W. E.—*Koptische Zünfte und das Pfeffermonopol*. A Coptic papyrus, Or. 8903, contains an acknowledgment on the part of some twelve city companies of Edfu for a grant of pepper, and thus adds to our knowledge of the pepper monopoly and the trade guilds. Each company in turn binds itself to distribute the allocation to its well-to-do members only, and with one exception (*not* the doctors!), the presidents have to sign by proxy as they cannot write.

JUNKER, H.—*Die christlichen Grabsteine Nubiens*. This article embodies the results of recent research on the distinctive character of Christian gravestones from Nubia. In these steles are reflected the origin and development of the Nubian church: its founding by Byzantium, the influence of the Coptic church and the survival of the Byzantine impress. Nubia is the only country outside Egypt where Coptic monuments have been found, and the Greek tombstones outnumber the Coptic. In Egypt, Coptic remained the national language even when Greek became for a time the official and business speech. Conditions in Nubia were totally different. Coptic was, indeed, necessary for intercourse with Egypt in the northern district, but the spread of this language to the south must be explained otherwise. The presence of Coptic tombstones in the southern districts is traceable to the use of Coptic as a second church language, owing to the later ecclesiastical dependence of Nubia on Egypt, and to the increased influx of Egyptian monks in consequence of the Mohammedan persecutions.

L. B. ELLIS.

NOTES AND NEWS.

British School of Archaeology in Egypt.

The examination of the cemetery in the Bahrein Islands by Mr. MACKAY has produced several forms and kinds of pottery, some with patterns ; also a spear-head and a heavy lance-head of copper or bronze. The back of an ivory figure has been fairly carved, with a narrow waist ; unhappily the front was destroyed anciently. The comparison of these should be made with remains from Arabia, but that is yet unknown ground. The richer tumuli had been plundered anciently, and the majority contain very little, owing to the breaking of pottery before burial and the salt damp of the soil destroying metal. This is an interesting beginning in a new field, and the connections of it should be important. The objects will be in the July exhibition at University College.

The fuller examination of the Badarian sites in the Fayum is described in the first article of this number. When the whole of the results can be drawn up, the earliest civilisation will be well defined, perhaps more completely than in any other country. The exhibition will be July 5th to 24th.

Mr. SANDFORD has been searching over the gravel of the Qeneh and Qau region, far into the deserts, and hopes to work out their age and human connections.

New Publications by Prof. Petrie. (1) The catalogue of *Buttons and Design Scarabs*, the first long series yet published of the button badges which came from the Syrian invaders ; there is also a supplement of later additions to the Scarabs with names. (2) The *Descriptive Sociology* of the Egyptians, carrying on the Herbert Spencer series ; this is a classification of what is known of the life, beliefs, and abilities of the Egyptians, under 436 headings. The system of the series was to rely on extracts, but for Egypt a large part had to be written-up for the first time, especially for the prehistoric stages of the various subjects.

Other Excavations.


At the subterranean temple of Abydos, Mr. Frankfort is actively clearing, assisted by an engineer, Mr. Felton, a student, Mr. Baly, and for inscriptions a copyist from Brussels, M. Van der Walle. News of the important lowest structure cannot be hoped for till the water is exhausted in the summer. It must always be remembered that the present water-level is twenty feet or more above what it was at the time of construction, and no lake or well existed then in the building.

After the impulsive claim of the Egyptian Government to publish what is discovered, but little is allowed to be known about the progress of the two controlled works on the royal burials. That near the Great Pyramid is now supposed to be a parent of Khufu on a *priori* reasons from its position, no new facts being stated. Nothing more is said about the belt with the name of Sneferu.

The very important excavations at Kish and Ur, and the still more astonishing works of the early Punjab and Baluchistan, are opening entirely new chapters of history, which cannot yet take their true place. The statue from the Punjab has on the robes the trefoil rosette characteristic of Babylonia.

ANCIENT EGYPT.

THE COSTUME OF THE EARLY KINGS.

THE earliest examples of the royal costume are on the great slate palette of Narmer and the three mace-heads of Hierakonpolis. The slate palette is the most important as giving the most detail. On the obverse the King (Fig. 1) is standing with uplifted arm about to slay an enemy, whom he holds by the hair, by a blow from a stone-headed mace. On the reverse the King (Fig. 2) is walking towards a scene of human sacrifice, carrying the mace in his left hand and a flail in his right hand. In each case he is followed by the  (Fig. 3) "servant of the King (?)" bearing the royal sandals (Fig. 4).

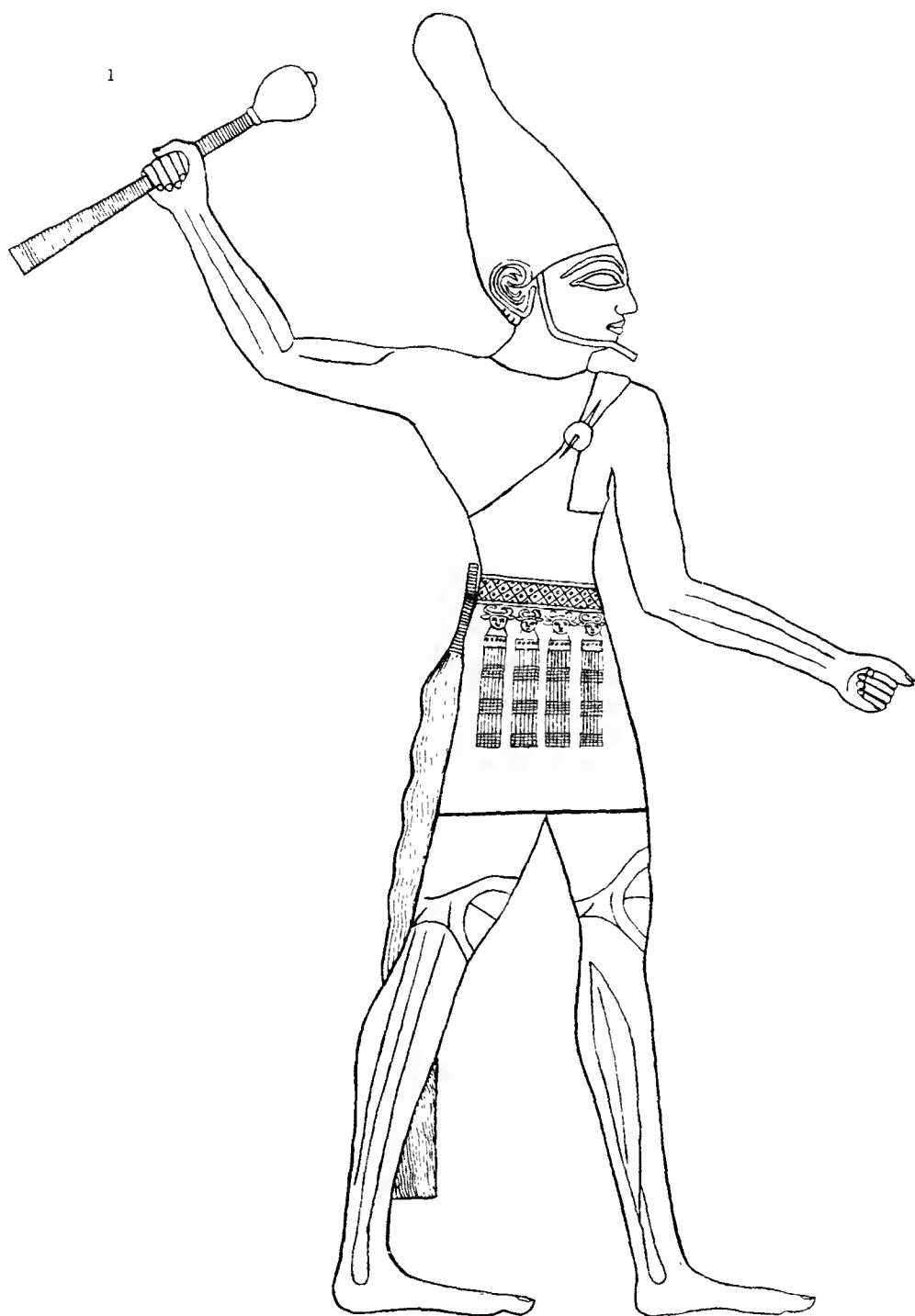
The tunic.—The King wears a kind of tunic which covers the body from below the breast to about half-way down the thigh and is held in place by a belt round the waist. One end of the cloth is carried over the left shoulder from the back, and is fastened to the other end on the left breast with what appears to be a metal fastener; on the left side the cloth is cut square in order to leave the arm free play. There is nothing to indicate the material of the tunic; it was probably of linen. The square cut under the arm suggests that the garment was sewn; in this it differs from the garment of the Scorpion King (Fig. 5), which might well be simply a length of cloth belted round the waist and the two ends fastened over the left breast.

The belt.—The belt is highly ornamental; it may be of metal, embossed leather, or beadwork. The raised bands on each side suggest metal, but the pattern is not unlike the quilted robe of the ivory king (Ab. II, Pl. XIII); it may therefore be of patterned leather. The suggestion that it is made of beads is also worth considering, for the design is of crossing diagonal lines with a dot in the middle of each diamond, a pattern which could be well and effectively worked out in beads. At the back, apparently fixed to the belt, though there is no visible means of attachment, is an animal's tail with long rippled hair. The length of the tail is probably exaggerated, for in the buffalo (Fig. 6) in the lowest scene of the reverse the same kind of tail is seen. It is clearly not a fox tail with which the men on the Hunters' Palette (Fig. 7) are adorned and which the pig-tailed man on the largest of the mace-heads (*Hierakonpolis*, Pl. XXVI A) is bringing as tribute. The importance of the bull's tail in the ritual costume of the king has always been noted, as well as the fact that it is also part of the costume of the gods in the New Kingdom and later, but the actual significance of it is not understood.

Prof. Petrie has pointed out (ANCIENT EGYPT, 1925, pp. 65, 66) that the bull's tail was considered a promoter of fertility, and R. E. Dennett (*At the Back of the Black Man's Mind*, p. 156) says that "the tail of the ox is the sign of office of all the Kongosovo among the Bavili." But neither of these authorities gives any reason for the origin of these customs. I therefore suggest the following: The Egyptian king is typified by two creatures—the falcon and the bull; but it is quite clear, on studying the evidence, that he is more truly a falcon than a bull. In life the falcon is always represented above his name; at death he becomes a falcon and flies away to the heavens. From the earliest times he is essentially the falcon-man, and his god, the sun, is represented as a falcon with the sun disk on its head. The falcon Horus, *i.e.* the dynastic invader, entered Egypt and conquered the country, but his religion was always an exotic, belonging only to the king and not accepted by the people. Egypt was then, and remained to the last, a cattle-worshipping country. To make himself acceptable to his people, the king had to become a bull. This was accomplished by a special ceremony, and the outward and visible sign in the eyes of the people that the king was actually a bull was the bull's tail attached to his person. I see in this ceremony the origin of the Sed or Tail festival, which Prof. Petrie has already noted as being connected with the tail worn by the king. The animal does not appear to be either *Bos Africanus* or *Bos brachyceros*, the two commonest forms of domesticated cattle in Egypt, but it is, as Prof. Naville pointed out nearly thirty years ago (*Rec. des Trav.*, XXI, p. 118), a buffalo. The tuft or tassel of long hair at the end of a buffalo's tail is considerably longer than that on a bull's tail, and this will account for the extraordinary length of the long hair on the tail which the King wears. The two Hathor heads (Fig. 8) at the top of the palette, on both the obverse and reverse, show the growth of horns characteristic of the buffalo, which is different from that of the ordinary cow. These two heads dominate the scene on each side, yet on the obverse, which is the more important side, the King's "totem," the falcon, is larger than the Hathor, larger in proportion than the King himself, and is represented as carrying the North captive, whereas Hathor's rôle is passive.

Prof. Newberry has suggested that the Sed festival was also a marriage ceremony, and this is also possible, for there is a parallel in Crete. When the new bull-worship was introduced into that island, the queen, through whom the descent was transmitted, as in Egypt, was disguised as a cow for the celebration of the Sacred Marriage, and the offspring of that royal and divine marriage was the Minotaur, half bull, half human. The Egyptian ceremony, however, suggests that it was the king, not the queen, who was disguised in a bull- or buffalo-skin. If my suggestion is correct, we have, then, a ceremony by which a man of a Falcon tribe marries the queen of a Cattle tribe, and therefore becomes a member of his wife's clan, the sign of the change being the tail which he wears as king in religious ceremonies. As king he was the giver of fertility, and as a bull he gave fertility to the cattle-worshippers—hence the use of the bull's tail in the field ceremonies, just as thongs of the skin of the goat, the sacred animal of the primitive population, were used to promote fertility in Rome. The Sed festival then is, if my suggestions are correct, the ceremony of making the falcon-king into a bull at the time of marriage to the queen of the cattle-worshippers.

On the obverse side of the palette, the king wears, hanging from the belt, four heads of the goddess Hathor with long fringes. The fringes are clearly of beadwork. It is interesting to note that here, again, the cattle cult is important,



HIERAKONPOLIS. I. PL. XXIX.

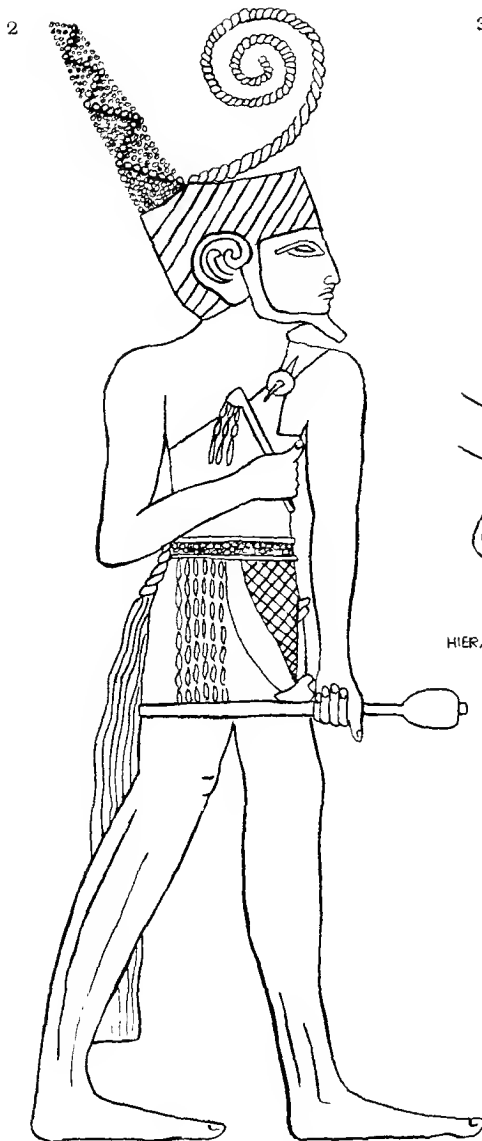
KING NARMER IN TRIUMPH.

as these are the king's only ornament. On the reverse, there are no Hathor heads on the belt; there appear to be two fringes, which hang direct without any heading; it is, however, possible that the decoration on the front of the tunic may be a woven pattern and not beads. Some sort of ornament hangs from the belt in front, but its form is so indistinct as to make it uncertain what it represents; the lower part appears to be a falcon of the horizontal form, characteristic of the early Ist dynasty; the upper part is unrecognisable.

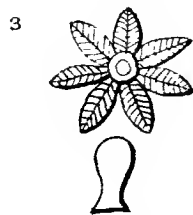
The crowns.—There has always been a considerable amount of speculation as to the material of which the crowns were made, but no indication has ever been found in any royal tomb. Even in the tomb of Tutankhamen, where the royal insignia were in profusion, neither crowns nor their imitations were found. It is evident, therefore, that they were not of metal or other material which could be fashioned once and for all. The conclusion then must be that they were head-dresses newly arranged every time when worn, like turbans.

The conventional shapes of the crowns were already fixed by the time of the Scorpion King and Narmer. The White Crown seems to have been made over a frame, possibly of lattice work or even a mere bundle of reeds, over which the cloth was smoothly folded; the folds are faintly visible behind the King's ear on the slate palette. The suggestion as to a turban is borne out by the representation of the White Crown of Mentuhetep III (Fig. 9, *Deir el Bahri: XIth-dynasty Temple*, II, Pls. IX, XII, XVIII), which has red horizontal bands, and diagonal lines indicating folds. It is possible that the shape was originally in imitation of a sheaf of corn. The form is imitated in the head-dresses of the women dancers in the tomb of Khnumhetep at Beni Hasan (Fig. 10, L.D. II, 126; B.H. I, Pl. XXIX), and the framework is seen in the two figures standing in a shrine in the funerary scenes in the tomb of Paheri (Fig. 11, Tylor, *Tomb of Paheri*, Pl. VIII). The outline of the White Crown is so like the outline of the *hkr* ornament, which again closely resembles the framework head-dress, that it seems likely that the *hkr* was originally the representation of a sheaf, which was the chief ornament of the king as giver of fertility. The form of the crown was completely conventionalised by the IIInd dynasty, as is seen in the head of Khasekhem (Fig. 12, *Hierakonpolis*, Pl. XXXIX, 5), which shows the method of fixing the head-dress round the ear.

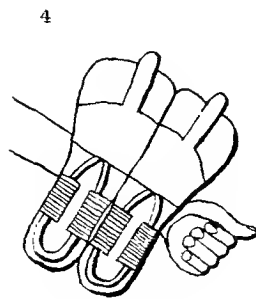
The crown of Lower Egypt is usually called the Red Crown, and occasionally, *i.e.* in the Old and Middle Kingdoms, the Green Crown. The earliest example is on a potsherd of the Amratean (first prehistoric) period (Fig. 13, *Naqada*, Pl. LII, 75; *J. E. A.*, 1923, Pl. XX, 3). The slate palette of Narmer gives the only detailed example (Fig. 2). Here it is very clear that the head-dress is a turban of a very elaborate type. The turban itself is of the form now worn by the Marwaris of Rajputana, where it is usually pink in colour. The folds of Narmer's head-dress are very clearly marked. The spiral in the front appears to be a piece of tightly twisted linen, and if the form is correctly represented it must have been made over a wire or other stiff foundation to keep it in position. Prof. Petrie suggests that it is the conventionalised form of an ostrich feather. The raised portion at the back of the crown appears to be of beadwork, evidently an entirely separate construction, as is seen in the ivory statuette of Khufu (Fig. 14), where the stand for the beadwork erection is unmistakably represented. The literary evidence also points to the fact that this crown was a turban, for in the XIIth dynasty Hymn to the Crowns (Fig. 15), in the verses addressed to the Red Crown, occur the following expressions: "Numerous are the folds



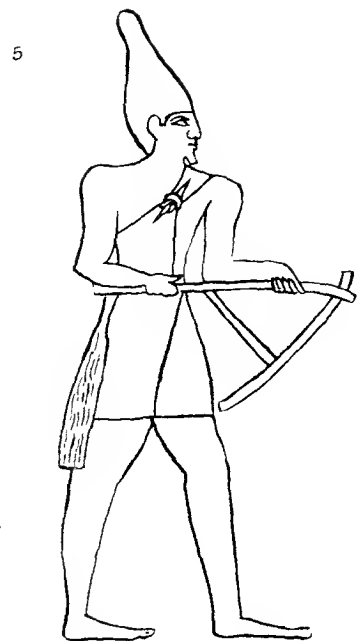
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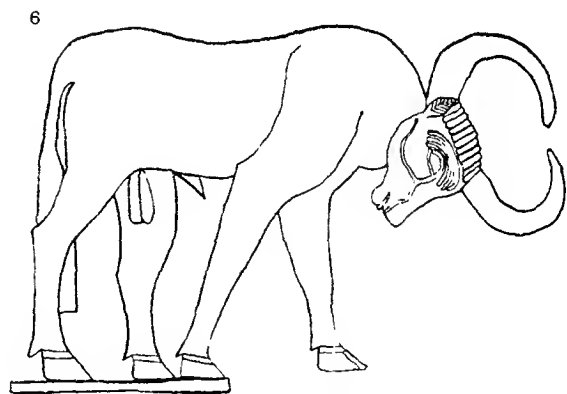
HIERAKONPOLIS
I. PL XXIX.



HIERAKONPOLIS I. PL XXIX.



HIERAKONPOLIS I. PL XXVI.C.



HIERAKONPOLIS I. PL XXIX.



CAPART PRIMITIVE ART FIG 170 P231




HIERAKONPOLIS I. PL XXIX

which appear on the head of Sebek" (sect. b, l. 17), and "Its folds are on thy forehead" (sect. f, l. 1).

In the tomb of Tutankhamen, as I have already observed, no crowns were found, but in a casket were many rolls of linen. It would seem an extraordinary thing to preserve mere linen with as much care as the jewels, but if these rolls were the lengths of linen required for the royal turban their importance can be recognised.

It must also be noted that there is no uraeus on the royal crowns, either in the Ist or IInd dynasties. The earliest appearance of the uraeus seems to be on the diorite statue of Khafra; it is rare in the Old Kingdom, and does not come into common use till the Middle Kingdom.

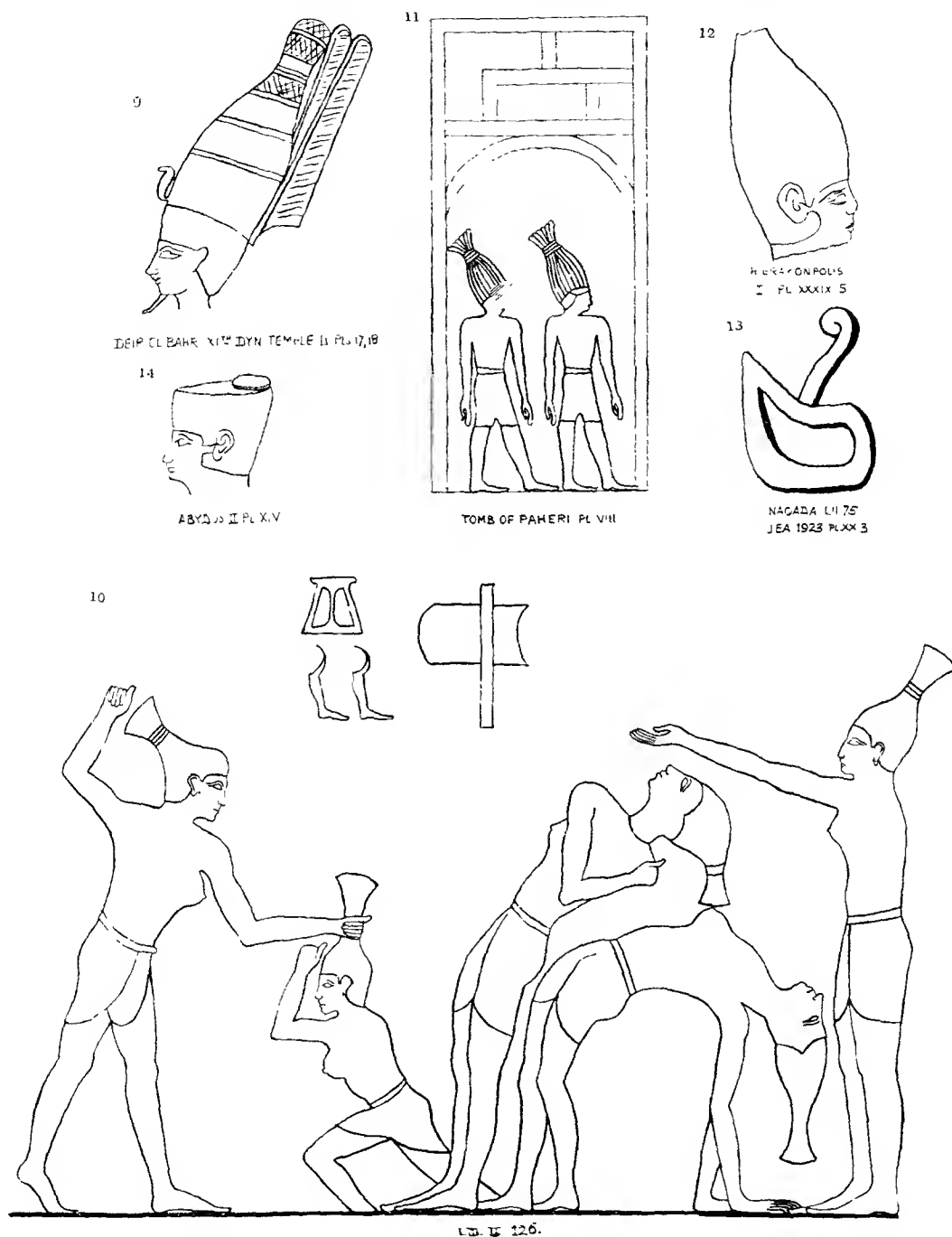
As far as literary evidence goes, besides the Hymn to the Crowns, there are two Middle Kingdom stelae which give some information (I am indebted to Dr. A. H. Gardiner for the reference). The  Semti, who was the possessor of both stelae, was, as his title implies, of high priestly rank. The *Imi Int* accompanied the Pharaoh in many religious ceremonies and is seen in attendance at the Sed festival (Petrie, *Palace of Apries*, Pls. III, VI, VII, VIII). Semti was "Divine servant of the South Crown and the North Crown, Creator-servant of the King's toilet, he who fashions (*mss*) the Great One of Spells, he who bears (*tw*) the Green Crown" (Fig. 16). In the second stela (Fig. 17) he is "Over the secrets of the two Crowns, the two Great Ones of Spells." As Dr. Gardiner points out, the reduplication in *mss* indicates a continuance of the action, *i.e.* the fashioning was performed not once but continually. This is confirmed by the title "Khnum-servant of the King's toilet," which shows that in the king's toilet a creative power was necessary. Both these titles show that the White Crown was a head-dress, presumably a turban, which had to be made every time it was worn. It is very certain that it could not be wound by the king on his own head—the height precludes the possibility—and to cover such an erection smoothly and correctly needed considerable skill. Semti "bore (*tw*) the Green Crown"; *tw*, being a trilateral root, does not reduplicate, but being parallel with *mss* it must have the same meaning of continuance. The use of a different word shows that there was a difference in the making of the two head-dresses (the determinative of the Green Crown is clearly a scribal error). There is nothing to show whether the word applies to the whole head-dress, which would then be a turban, like many of the present day, which can be lifted on and off without being disarranged, or whether it applies to the fixing of the spiral and the beadwork after the turban was wound on the head. But in either case the arrangement required a skilled hand. It is evident, then, that the officer who was over the secrets of the king's toilet and was in charge of the making of the crowns, had no sinecure, and that the title was not an empty one.

If my suggestions as to the king's costume are correct, two facts emerge from this short study:—

1. The dynastic invaders were not of the same religion or race as the indigenous Egyptians, but to make themselves legitimate and acceptable rulers they were adopted into the Bull-tribe by being invested ceremonially with the tail of the sacred animal, perhaps originally with the whole skin.



2. The provenance of the invaders is suggested by their royal head-dress. The turban was never worn in Pharaonic Egypt except by the king and by foreigners (Fig. 18); it appears to be indigenous to Asia, more especially to Persia and to northern India. The connections between Elam and prehistoric

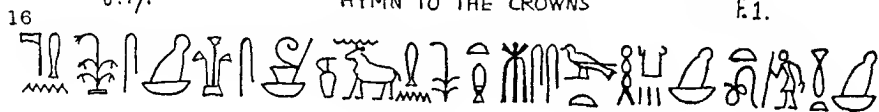
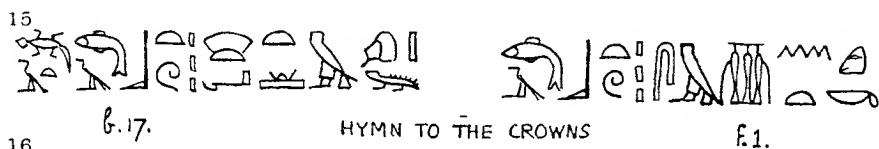
Egypt are already established. In view of the early connections which are now known to have existed between northern India and Sumeria, it is possible that there may have been a common centre which also influenced Egypt.



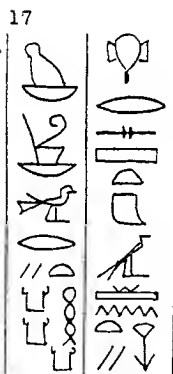
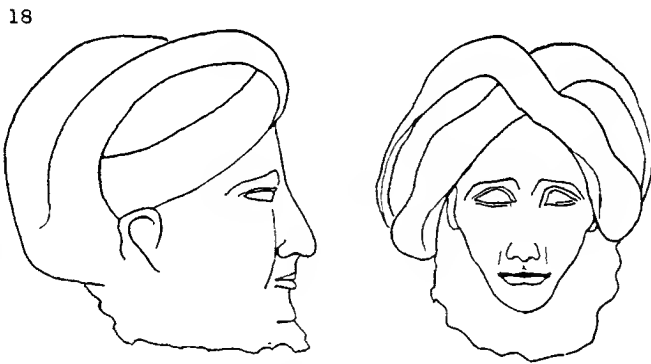
In the Pyramid Texts are several mentions of the Red Crown. Though these give no indication of the material or form of the crown, they are of importance as showing that it was in itself a deity. I quote three from the Unas Text:—

“The doors of the Horizon open, its bolts are withdrawn, and he comes to thee, O Neith; he comes to thee, O Flame (☐); he comes to thee, O Great One; he comes to thee, O Great One of Spells.” (W. 269, N. 719; Sethe, §194.)



"Hail, Neith! Hail, 'In! Hail, Great One of Magic! Hail, Flame ()! Thou causest that the Terror of this Unas shall be like the Terror of thee. Thou causest that the Fear of this Unas shall be like the Fear of thee. Thou causest that the *h't* of this Unas shall be like the *h't* of thee. Thou causest that the Love of this Unas shall be like the Love of thee. Thou causest that his sceptre (*b3*) shall be the leader (lit., in front) of the Living. Thou causest that his staff (*sh'm*) shall be the leader (lit., in front) of the Horizon-people. Thou causest that his weapon () shall be strong against his enemies. Hail, 'In! Thou hast come forth from him, and he has come forth from thee. The *ih't-wrt* has fashioned thee, the *ih't-wtt* has ornamented thee; the *ih't-wtt* has fashioned thee, the *ih't-wrt* has ornamented thee." (W. 272; Sethe, §§ 196-8.)



STELA OF SEMTI. B.M. No 574.

STELA OF SEMTI
B.M. No 839

MEMPHIS II PL. XXXVIII. 73

"Unas has repeated his appearings in heaven, he is crowned ( ) as Lord of the horizon. He has cut to pieces the joints of the vertebrae, he has carried away the hearts of the Gods. He has eaten the Red Crown, he has devoured the Green One. Unas is nourished (*wsb*) with the lungs of the Wise Ones, he is satisfied by living on their hearts and magic. He who bears (supports) Unas, he swallows the fluids (lit., that which flows) which are in the Red Crown. Unas continually prospers when their magic is in his stomach." (W. 517, T. 328; Sethe, §§ 409-11.)

I have to thank Mr. Gerald Harding for making several of the facsimile drawings which accompany this article.

M. A. MURRAY.

THE ORIGINS OF THE BOOK OF THE DEAD.

To understand the mythologic literature of Egypt it is needful to have regard to the many sources of population, each of which has in turn probably added to the heterogeneous mass of myths that is seen in the historic times. One great group of myths, known as the Pyramid Texts, is particularly the royal religion, identified with the line of kings in the Vth dynasty, and knows nothing of the geography of the Book of the Dead; as it contains much of remote savagery in its composition, it has clearly been brought in with ancient tribal traditions. On the other hand, the Book of the Dead is the popular mythology, cherished by the majority down to the end of paganism, yet containing much that is very primitive embedded in its structure. Until we obtain a firm outline of the various tribal movements and invasions of prehistoric times we cannot hope to analyse the confusion of the mythology. There is good hope that, by advancing the study of the varied civilisations side by side with that of the mythology, each may serve to elucidate the other.

The discovery of the Badarian civilisation has greatly changed our ideas of the early history. We are in the presence of an advanced culture, apparently imported, and decaying in Egypt. There is the probability that it came from Asia, and connections point to the Caucasus region. This is a very old idea, as Herodotus comments on the traditional connection of the Colchians with Egyptians, and states that in his time they were still alike in customs, way of living, and language. Now, in the Book of the Dead, as Prof. Fessenden has pointed out, a most striking peculiarity is the frequent mention of lakes of fire, not as places of horror, but in the midst of the paradise of cultivation, yet also associated with barren ground and high mountains. Such incongruous conditions are not often to be found; they cannot have been suggested by Egypt itself, but certainly belong to some distant region, and the nearest country with such features is the Caucasus, with its oil springs in the midst of the most fertile valley surrounded by barren mountains.

The suggestion that the Book of the Dead embodied traditions of the Caucasus region has been noted already in this journal (1924, p. 124). Such a possibility is so important, that it is worth close examination to see whether the evidence is systematic, or is only an accidental resemblance. There are some geographical indications to be gathered in these traditions, places being described as east or west, north or south, up or down stream. So long as the whole descriptions are referred to mere imaginations of a spiritual world, the details have been neglected. But if the possibility of a tradition being based on real localities is considered, then the descriptions should be carefully observed. During the present misfortunes in the region of the Caucasus, it is impossible to examine the early civilisations there; all that can be done is to take the evidence of names, so as to prepare the way for testing the conclusions on the actual ground at some future time.

The suitability of such a region for civilisation is attested by Strabo (XI, iv, 3) ; he describes Albania, the lower part of the valley of the Kur, as producing "every kind of fruit, even the most delicate, and every kind of plant and ever-green ; . . . all that is excellent grows without sowing, and without ploughing . . . In many places the ground, which has been sowed once, produces two or three crops, the first of which is even fifty-fold, and that without a fallow . . . The whole plain is better watered than Babylon or Egypt, by rivers and streams, so that it always presents the appearance of herbage . . . The young trees bear fruit even in the second year, but the full grown yield so much that a large quantity of it is left on the branches. The cattle, both tame and wild, thrive well in this country. The men are distinguished for beauty of person and for size." In modern times, Maurier, in his *Guide au Caucase* (1894), mentions maize as the main crop, growing seven to ten feet high, and bearing eight hundred-fold. Flax has been an immemorial crop in Mingrelia. These descriptions accord with the fertile Egyptian paradise, with flowing streams and growing corn seven cubits high. The temperature in the winter is that of the south of England ; in the summer it is like that of northern Lombardy.

In looking at the Egyptian traditions, the natural condition of a people who have emigrated must be taken into account. The Norse entering Britain planted the names of their gods in many places ; they adopted these places as the new homes of their mythology. In modern times, emigrants use names from their old country in new conditions. In the United States there are two or three dozen of each of the names of our principal cities. The spoken form of a name may be commoner than the real form. There are seven Sandfords in England, only one in America, alongside of nineteen Sanfords there. Further, when migrating people are without writing they depend entirely on the spoken names, and when, in later time, the names begin to be written, it is natural for them to be expressed by rebus words, which have nothing to do with the sense, but only show the sound. An unlettered Englishman might address a letter to Livorno by drawing a leg and a horn. It is obvious that the Egyptian form of writing an imported name may appear quite Egyptian in its dress, and yet be a verbal representation of its original sound.

In order to test the possible connection of Egyptians with the Caucasus, all the geographical terms of direction associated with place-names must be noted ; the names must then be searched for in the Caucasus in the same relative connection, as this greatly limits the range, and so gives further likelihood to such similarities of name as may pass this test. The results of this comparison are stated on the accompanying map ; the names in capitals are those in the Book of the Dead, those in small type are the classical forms in Ptolemy's Geography, those in italics are the modern names.

One of the most important names is that of the kingdom of Osiris (ch. xviii, cxxvii) or Un-nefer (ch. xv), called AKRET or IKRET. This is closely like the Greek name of a region in the upper part of the main river, Ekretike, the modern *Katlia* ; see note on p. 45.

The "pillars of Shu" were prominent hills over which the sun rose (ch. cix of Nu), therefore somewhere east of the kingdom of AKRET. The gate ZESERT (=TOSORT, Gr.) is the gate of the pillars of Shu (ch. xvii), and therefore also east of AKRET ; in that relation we see the district of Tosarene.

Near ZESERT lay the most fertile plain of the fields of AĀRU or IĀRU, and thus near Tosarene is the river *Iora* through the midst of Transcaucasia. This

river has others on either side of it which receive the mountain torrents, while it only drains a fertile plain free of violent changes. In a *Trip through the Eastern Caucasus*, 1889, the Hon. John (later Lord) Abercromby describes the level cultivated plains traversed by the Iora; again, a splendid open grassy space, with abundance of wood and water at an elevation of 3,600 feet above the sea, with the Iora, and beyond it more wooded hills. The blessed fields of the IARU yet had a lake of fire in them, and on the Iora is a great naphtha spring, marked N on this map.

The fields of IARU are described as behind, or "at the back of the head" of KĀRU (ch. xvii), and the waters of the Iora start from the mountain at the head of the *Kur* river. The description rather suggests looking at this region from the Colchis side.



From AKRET the Egyptian sailed down the river (ch. xv) to DADU or TATTU; so, descending from Ekretike, the region of Tot, Totene, is reached, half-way to the river mouth.

Further on, it is said, the eastern gate of heaven had on its south the lake of KHALUSA (Nu, ch. cin); so at the eastern end of the valley, on the south side, was Kholuata, now lake *Chalasi*.

We read that RESTAU is the DUAT region (ch. xvii)—they are identical. The DUAT had its north gate at ZESERT, Tosarene, and so lay south of that, and in the south-east is *Resht*, agreeing to the name of RESTAU.

To the north of the fields of IARU was the river REU (ch. cxlix); and at the north of the Caucasus is the great river Rha, the Volga.

BAKHAU is often named; it was a great mountain upon which heaven rested, $9\frac{1}{2}$ by $6\frac{1}{2}$ miles in size, which seems like a real estimate. It was at the east, "Mount Bakhaus of the rising sun" (ch. clxxii, Nebseni); the name seems connected with *beka*, "the dawn." *Baku* at the eastern end of the Caucasus range agrees with this position.

At the other end of the day was the land of sunset, TAMANU (ch. xv, D. 6, 12; E. 15). The western end of the Caucasus range is the *Taman* peninsula.

So far, we are dealing with places whose position is stated in relation to each other, and which therefore support each other in identification. Other places may less certainly be identified, by the names in a suitable position, but not directly connected one with another.

Homage is paid to the divinity of the stars in AUN or ON, which lay to the west (ch. lxxxv), and the god Annu in ANDES (ch. xv). The stars of the gods are specially the undying ones in the north, and looking north from Ekretike there is the city *Oni*, and the mountains of *Andish*. The "divine door of the city of BTA" may possibly be the city of Ptua near Totene.

ANRUDEF, "it does not increase," the barren region, had DUAT and RESTAU to the south of it (ch. xvii). It seems likely that it was the Caucasus mountain range.

There was a lake of fire in that region near the SHENY dwelling (ch. xvii); at the foot of the mountains in Sanua.

Not far from this is Mosega, and this might be MESQTO, which was a place of purification, probably by fire (ch. cxxii, clxxvi).

ASTES is reached after ANRUDEF (ch. cxlvi), probably the same as ASSET, which is said to be too remote to be seen (ch. cxlix). Both descriptions would agree to the northern place *Ashti*.

DESDES was the lake over which the sun set (ch. xv), and repeatedly it is claimed that this lake is at peace. The name is literally "the choppy"; from the position, it would refer to the Black Sea, and the prevalent west wind would make it rough on the eastern coast.

MAOATI was a lake, of which the heads, or sources, were known (ch. xvii). It is singularly like the name of the lake of Maiotis, or *Sea of Azov*.

The FENKHU were a people who gave gifts, which were buried on the shore of the lake MAOATI (ch. cxxv), and they were therefore in its region. This suggests a possible link with Phanagoria at the mouth of Maiotis.

In chapter cx there are three lakes drawn, named URMU, QETQETMU, and HETEPMU, or the "great," the "moving" and the "peaceful" lakes. The name URMU may be linked with *Urmia*, the large lake south of the Caucasus; if so, the moving and quiet lakes might be lakes *Van* and *Sevan*.

This list accounts for most of the important names of places in the mythology of the Book of the Dead. Names, however, are very risky material on which to base conclusions; no doubt almost any name may have one or more parallels somewhere in the world, yet here we are dealing with a single region, and the names fall into place in accord with the indications of direction one from another. It seems very improbable that in so limited a field, already indicated by the physical description, more than a dozen names should so closely correspond, without having a real connection.

If this localisation should be accepted, it will have much influence on our understanding of the early religion. We may begin to analyse the Book of the Dead into the Caucasian and Nilotic sections. Osiris, repeatedly named as

ruler of Akret, will thus be linked to the earliest stratum, and be of northern origin. Byblos may then have been an Osiris sanctuary during the migration through Syria. The strange mention of Sebek at Bakhu looks like some transference of Egyptian ideas. Possibly, the Zeus named by Strabo was Zeus Sabasios of Asia Minor, and so the name Sabas might have been transformed to Sebek on going to Egypt.

The mediaeval history of the kingdom of Akret or Ekretike may be here noted, from Telfer's *Crimea and Transcaucasia* (1876). The position of Ekretike is that of the modern Imeritia, which kingdom was formerly called Egris (ii, 30), from Egros, son of Thargamos (Togarmah). This Egros seems to be equivalent in another dialect to Karthlos, son of Thargamos (i, 172). From him is named Mount Karthlos and the rivulet Karthly (i, 162, 172). Evidently this district was the great kingdom of the country (*see* i, 176; ii, 33), with a long tradition of its early importance, which we can now perceive far back in the beginnings of civilisation.

In looking at a remote origin for the popular mythology of Egypt, we must remember the persistence of folk-tales and their long antiquity. They are cherished as religious literature even when of secular origin, such as the Tibetan sacred books, which are the racy and vivid stories of north Indian life during the Asoka period. When only transmitted by word of mouth, they can survive for thousands of years, like the Eskimo tales which are verbally the same on the Atlantic and Alaska, though the people rarely know anything more than a day's journey from their own centre. The maintenance of a detailed record of history goes back for many centuries in the African kingdoms, and the Polynesians (in spite of being so scattered) have kept in memory their migrations and colonising of New Zealand. There is, therefore, no improbability in place-names which have been embodied in mythology being preserved for very long periods.


























It appears, then, that the cultural connections of the earliest Egyptians, as well as the physical descriptions in their mythology, point to the Caucasus region. When, further, we find there the names of the principal places of the mythology in their relative positions, it gives strong grounds for regarding that region as the homeland of the earliest civilisation of the Egyptians.




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





WOMEN'S TITLES IN THE MIDDLE KINGDOM.







IN the study of race identities, the evidence from the attitude of any race towards its women is not without value, and on this point the study of titles furnishes useful suggestions. Hence the following comparative study of women's titles in the Old and Middle Kingdoms. With regard to references to numbers, it is not suggested that all possible sources have been exhausted; but the amount of material gone over is sufficiently large to warrant a presumption that, should further instances be noticed, the relative frequency of the titles would not be materially altered.

In the Old Kingdom, the frequency of women's titles, especially religious ones, is remarkable; and no less remarkable is their comparative dearth in the Middle Kingdom.

In the Old Kingdom, women are  of Hathor (M.I. XXIX), Neith (M.I. XXVIII), Anpu (L.D. II, 41b), Thoth (M.M. D. 5), and Upuaut (L.D. II, 87); also of Sneferu (A.S. III, 202), Khufu (M.M. B. 2), and Teti (M.M.D. 65). One is *hem neter* Neith Khenti Khafra (B.M.St. I, 6). Other religious titles are   (M.C. 525), also   and  ;   (M.A. I, 2),   (M.C. 525),    (B.M.St. I, 17),   (M.S.M I, vii),   (M.A. I, 2), also  ;   (M.M. B. 3),    (A.S. XV, 214).

Of these only two, the Hemneter Hathor and the Hnwt, survive into the Middle Kingdom, and the Hnwt is exceedingly rare. Nevertheless, there must have been a regular service with this title, for a Middle Kingdom stele (S.G.D. 20026) carries an invocation to various religious officials, including the   . The only really common Middle Kingdom religious title is the Hemneter Hathor, and even this seems to occur only one quarter as frequently as in the Old Kingdom.

On the other hand, new religious titles make their first appearance in the Middle Kingdom. The invocation mentioned above cites a class of  . In dynasty XII, the wife of Ameni and the wife and daughter of Khnumhetep are   (B.H. I, xviii). Neith has no Hemneter, but in dynasties X or XI we find a   (P.Sc. XI, T). There are several instances (undated) of the title *Min Rswt*, "Watcher of Min" (L.S. 28001), and one of a "Watcher of Bast, Horus and Min" (L.S. 28002).

The  (SSST), which becomes so common in the New Kingdom, is found on a few scarabs of dynasties XII and XIII (P.Sc. XV, B.R.). There is also a   (P.Sc. XVI, F.). In dynasty XIII appears the first   .

(S.G. D. 20056). Specially interesting is the title $\overline{\text{H}} \overline{\text{D}}$, which is usually associated with Aahmes Nefertari and her successors.

1	$\overline{\text{H}} \overline{\text{D}}$	XII	$\overline{\text{H}} \overline{\text{D}}$	PT II XI 71 a)	36	undated	$\overline{\text{H}} \overline{\text{D}}$	SGD 20058
2				PT I II b)	37		$\overline{\text{H}} \overline{\text{D}}$	LS 28008
3				NG 9 B	38	$\overline{\text{H}} \overline{\text{D}}$	XI	DBN IXVII E
4				P.L.C 13 c)	39		$\overline{\text{H}} \overline{\text{D}}$	1b I xxi
	$\overline{\text{H}} \overline{\text{D}}$			1 infra no. 26 et seq.	40		$\overline{\text{H}} \overline{\text{D}}$	1b. IXVII
5	$\overline{\text{H}} \overline{\text{D}}$	XIII		B.M.St IV 24	41		$\overline{\text{H}} \overline{\text{D}}$	1b. III. II
				PK 12-13	42		$\overline{\text{H}} \overline{\text{D}}$	1b. IXVII D
6	$\overline{\text{H}} \overline{\text{D}}$	XIII		B.M.St IV 27	43		$\overline{\text{H}} \overline{\text{D}}$	LS 28025
7	$\overline{\text{H}} \overline{\text{D}}$	XII-XY		SGD 20056 f)	44		$\overline{\text{H}} \overline{\text{D}}$	B.M.St III 32
8	$\overline{\text{H}} \overline{\text{D}}$			MC 619	45	undated	$\overline{\text{H}} \overline{\text{D}}$	SGD 20005 e)
9				MC. 619	46		$\overline{\text{H}} \overline{\text{D}}$	SGD 20010 e)
10				MC. 619	47		$\overline{\text{H}} \overline{\text{D}}$	SGD 20013 e)
11	$\overline{\text{H}} \overline{\text{D}}$	XI		PTC XXII	48		$\overline{\text{H}} \overline{\text{D}}$	LS 28001
12		XII		B.M.St II 6	49		$\overline{\text{H}} \overline{\text{D}}$	LS 28002
13				B.M.St II 42	50		$\overline{\text{H}} \overline{\text{D}}$	LS 28006
14				B.M.St II 44	51		$\overline{\text{H}} \overline{\text{D}}$	LS 28008
15				B.H.I xxxv	52		$\overline{\text{H}} \overline{\text{D}}$	LS. 28010
16				PTC XXVIII	53		$\overline{\text{H}} \overline{\text{D}}$	LS 28013
17		XIII-XIV		MC 861	54		$\overline{\text{H}} \overline{\text{D}}$	LS 28018
18				MC 861	55		$\overline{\text{H}} \overline{\text{D}}$	LS 28026
19				MC 901	56	$\overline{\text{H}} \overline{\text{D}}$	XI	LD II 149 f)
20				MC 932	57		XII	L.K. 178 g)
21				MC 977	58			PT. I II b)
22				MC. 1041	59			NG 9. B
23				MC 1496	60		XIII	PSG XVIII 214 h)
24	$\overline{\text{H}} \overline{\text{D}}$			LS 28006	61			PSG XIX
25	$\overline{\text{H}} \overline{\text{D}}$	XIII-XY		MC 854	62			ACW XIII d)
26	$\overline{\text{H}} \overline{\text{D}}$	XI		DBN I XXI	63			PSG XVIII 224 e)
27				1b I XX	64	$\overline{\text{H}} \overline{\text{D}}$	XI	MC 550
28				1b III II	65			LS 28011
29		XIII		B.M.St IV 18 d)	66			LS. 28015
30				LS 28002	67			LS 28017
31				LS 28011	68	$\overline{\text{H}} \overline{\text{D}}$	XI	B.H. I XVIII
32				LS 28015				
33				LS 28017				
34				LS 28017				
35				LS 28030				

a) QUEEN OF SENSERT II

b) ? DAUGHTER OF SENSERT II

c) QUEEN OF SEBEKEMSAUF III

d) MOTHER OF SEBEKHETEP III

e) PROBABLY EARLY M.K.

f) MOTHER OF MENTUHETEP IV

g) QUEEN OF AMENEMHAT I

h) MOTHER OF NEFERHETEP I

i) MOTHER OF SEBEKHETEP IV

Quite unequivocal is the $\overline{\text{H}} \overline{\text{D}}$ $\overline{\text{H}} \overline{\text{D}}$, which occurs in association with Mentuhetep III on a fragment of a stele, thus carrying the title back to dynasty XI (B.M.St. VI, 29). The god's concubine would naturally appear

about the same time, but the only instance of the title seems to be who was priestess of Hathor and (L.S. 28006). This coffin has been referred to dynasty IX or X.*

69		II		DB XI. IXVII E	101		II		G.I.L. fig 68 ⁵⁾
70				ib I XVIII	102				S.B.A. XXVIII 105
71				ib I XVIII	103				M.F.D. II 73
72				ib I XVII B	104				M.F.D. II 68
73		XII		P.Sc. XII 12.2 36	105				M.F.D. I 56 ⁴⁾
74				M.F.D. XIX 37	106				M.F.D. I 56 ⁴⁾
75				G.S.I. 71 ^{K)}	107				M.F.D. I 69 ⁴⁾
75				M.F.D. II 71 ⁹⁾	108				M.F.D. I 62 ⁴⁾
75				M.A. II 46 ^{m)}	109				M.F.D. II 105 ^{v)}
76				M.F.D. II 101 ⁿ⁾	110		XIII		M.D. 104 ^{w)}
77				M.F.D. I 54 ^{d)}	111				M.D. 104 ^{p)}
78				N.G. 9.B	112				M.D. 104 ⁿ⁾
79				M.F.D. I XX 48	113				Pt. M. VIII ^{x)}
80				M.F.D. I 60.46	114				Pt. M. VIII ^{x)}
81				M.F.D. I 69.15	115				M.D. 70 3. 4)
82		XII & XIII		P.Sc. XVIII	116				S.G.D. 20058 ⁴⁾
83		XIII		P.Sc. XVIII	117				S.G.D. 20058 ⁴⁾
84				P.Sc. XVIII	118				P.K. XII.2 ^{z)}
85				M.D. 104	119		undated		L.S. 28104
86				Pt. M. VIII ^{p)}	120		II		G.S.I. XXI.71 ⁵⁾
87				M.D. 70 3 ^{q)}	121				P.T. II XI.71 ^{m)}
88				S.B.A. 1003, 358 ⁿ⁾	122				A.S. VIII 48 ^{v)}
89				1005 102	123				M.F.D. I 77
90		XIII & XIV		P.K. XII.2	124		undated		L.S. 28011
91				P.Sc. XIX 14 a	125				L.S. 28015
92				P.Sc. XIX	126				L.S. 28017
92		XII		P.T. I II ^{b)}	127		XII		G.S.I. 71 ^{k)}
93				L.D. III. IV ^{o)}	128				P.T. I II ⁵⁾
94		XII & XIII		P.Sc. XVIII.13.D.B.	129				P.T. II XI.171 ^{m)}
95				P.Sc. XVIII	130				N.G. 9.B
96				P.Sc. XVIII	131				B.M. St. IV. 9
97		XIII		P.Sc. XX 1327.23					
98				P.K. XII.2					
99				P.L. II C 13 ^{c)}					
100		XIII		A.Z. XXXVII 91.96 ^{m)}					

K) QUEEN OF SENSERT I

l) QUEEN OF AMENEMHAT II

m) " " SENSERT II

n) " " AMENEMHAT II

o) " " SENSERT III

p) " " SEKHEMKARA

q) " " NEFERHETEP I

r) " " SEBEKHETEP III

s) ? DAUGHTER OF SENSERT I

t) A PRINCESS: t. AMENEMHAT II

u) DAUGHTER OF SENSERT III

v) " " AMENEMHAT III






w) " " SEKHEMKARA



















































































x) " " SEBEKHETEP III

y) " " NEFERHETEP I


z) " " SEBEKHETEP III




The numerical incidence of all these titles is very small, leaving it to be inferred that the part played by women in the religious life of the Middle Kingdom was less than that in the Old Kingdom.





Political and social titles are also few. In the vast majority of cases the lady is  only, or characterised by a mere epithet, MR RT. F. Nevertheless some of the old honourable titles survive, and yet new ones appear. The survivors are the  (nine instances in dynasty XII, three in dynasty XIII), the  (eight times) and, once, a   (see the list).






132		XII		M.F.D. I 54 ^{y)}	168		PT II N 171 ^{z)}
133	(cont)	(cont)	—	M.F.D. IX 13 ^{y)}	169	—	M.F.D. I 77
134	(cont)			B.H. I XLVI	170		PT I II 7)
135				AS VIII 48 ^{y)}	171		B.M. St VI. 29 ^{o)}
136		XIII		P.Sc. XVIII 204	172		B.H. I XLVI
137				P.L. II C 13 ^{o)}	173		PT II XI 171 ^{z)}
138		XIII-XIV		P.Sc. XIX	174	—	M.F.D. I 77
139		XII		B.H. I XXXII	175		P.L. II C 13 ^{o)}
			v. supra Nos 64-67		176		PT II XI 171 ^{z)}
140		undated		L.S. 28001	177		PT II XI 171 ^{z)}
141				L.S. 28006	178	—	PT I-III 7)
142				L.S. 28010	179		NG 9 B
143				L.S. 28011	180	—	B.M. St IV 9 ^{u)}
144				L.S. 28017	181		AS VIII 48 ^{y)}
145		undated		L.S. 28002	182		Invocation undated v. NtE) SGD 20026
146		XII		B.H. I XXXV	183		B.H. I p. 36
147		XI		DB XI III. II	184		B.H. I XII
148		Invocation: undated		SGD 20026 ^{y)}	185		B.H. I XXXV
149		XII		B.H. I XVIII	186		B.H. I XXXV
150				B.H. I XXXV	187		B.H. I XXXV
151				B.H. I XXXV	188		PT II XI 171 ^{z)}
152		XI		M.C. 548	189		ib ib
153				M.C. 550			
154				B.M. St III 32			
155				DB XI I XVII			
156				DB XI I XXI			
157				DB XI I XX	190		P.Sc. XY BR
158				DB XI I p. 49	191		XII Scarab — P.Sc. XVI F
159				DB XI I XVII-D	192		B.H. XXXII
160		XII		B.H. I XVIII			
161				B.H. I XXXV, XXXV			
162				B.H. I XXXVI			
163				B.H. I XXXVI			
164				D.G. Ag. XIV, XV			
165		XII		B.H. II XXI X			
166		XIII-XIV		M.C. 945			
167		XIV	—	P.Sc. XX			


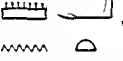

x) QUEEN OF SENUSERT III
y) ROYAL SCARAB T SENUSERT III

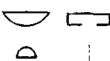

y) DAUGHTER OF AMENEMHAT III
o) QUEEN OF SEBEKENSUF III
z) 
z) QUEEN OF SENUSERT II
7) PRINCESS T SENUSERT II
o) FRAGMENT OF A STELE BEARING THE NAME OF MENTUHETEP III
u) DAUGHTER OF SENUSERT III

Several new titles which appear suggest that the bearers held real political power. Tāt, the second wife of Khnumhetep, is  (B.H. I, xxxv). The Queen of Senusert II is  and  (P.T. II, xi, 171), and the last title is also borne by the wife of Khnumhetep II (B.H. I, xlvi).

Significant, however, is the comparative frequency of titles which express a personal or harem relationship to the king. The title  begins in dynasty IV, but quadruples its incidence in Middle Kingdom records as compared with those of the Old Kingdom, while  appears as a new title.  occurs in about the same proportion at both periods, but  is less common in the Middle Kingdom.

Titles descriptive of favourite are frequent at both epochs. These comprise the , ,  and , which seem to be applied only to princesses or close associates of the king. The  survives from the Old Kingdom, but in much diminished numbers.

Merely occupational epithets, such as , serving-maid, are here omitted, but the title  seems to stand apart from these, as signifying an honourable position in the family. It occurs with increasing frequency from dynasty XI to XIII, and the menats are depicted on the steles in the same position of honour as the daughters. Moreover, two of them have daughters who are  (S.G.D. 20018). Nor is the title an exclusively feminine one; on a stele of the time of Senusert II (B.M.St. II, 8) it is borne by a man and seems to have a religious significance, for he is "Menat of Horus of the Aha."

A list of these and other Middle Kingdom titles is appended. Two titles have been omitted from the list:—, because it occurs with such frequency that it would greatly outnumber all the rest put together, and , because it has been fully dealt with by Mr. Guy Brunton in *Lahun I*, Pl. XV and p. 21.

EDITH M. GUEST.

Abbreviations:—A.C.W., Ayrton, Currelly, Weigall, Abydos III. A.S., Annales du Service, Cairo. A.Z., Zeits. Aeg. Sprache. B.H., Newberry, Beni Hasan. B.M.St., British Museum Steles, Hall. D.B. XI, Naville, XIth-dynasty Temple. G.J.L., Gauthier-Jaquier, Lisht. G.S.I., Gardiner, Sinai Inscriptions. L.D., Lepsius, Denkmäler. L.K., Lepsius, Königsbuch. L.S., Lacau, Sarcophages, Cairo. M.A., Mariette, Abydos. M.C., Mariette, Cat. Gen. d'Abydos. M.D., Monuments Divers. M.F.D., De Morgan, Fouilles à Dahchour. M.I., Murray, Index of Names. M.M., Mariette Mastabas. M.S.M., Murray Saqqara Mastabas. N.G., Naville, Goshen. P.K., Petrie, Koptos. P.L., Pierret, Louvre Inscr. P.S., Petrie, Season 1887. P.T., Petrie, Tanis. P.T.C., Petrie, Tombs of Courtiers. Pr.M., Prisse, Monuments. Rec., Recueil. S.B.A., Soc. Bibl. Arch. Proceedings. S.G.D., Schäfer, Grab und Denkstein, Cairo.

THE RELATIONS OF EGYPT TO ISRAEL AND JUDAH IN THE AGE OF ISAIAH.—I.

OUR first definite knowledge of political contact between Egypt and one of the Hebrew states in the period of Isaiah's activity is derived from 2 Kings, xvii, 4: "And the king of Assyria found conspiracy in Hoshea; for he had sent messengers to So [better 'Seve'] king of Egypt, and offered no present to the king of Assyria, as he had done year by year."

This Seve is generally identified with Sibe, the tartan of Egypt, of whom we read in Assyrian inscriptions of the year 720 B.C. Two main views are held as to his identity. He is regarded by some as Piankhi's¹ commander, by others as an otherwise unknown Egyptian kinglet.² Thus Professor Peet writes: "The wisest course would seem to be to identify So, king of Egypt, with one of those numerous petty dynasts who ruled in the Egyptian Delta during the years which elapsed between Piankhi's conquest of Egypt and Shabaka's establishing himself on the Egyptian throne." This latter view is related to the conception formed of the dealings of the Ethiopians with Egypt. To estimate it properly we must take this into consideration. It is clearly and briefly stated by Professor Peet.³

"In the reign of . . . Osorkon III, Egypt was invaded by a certain Piankhi, king of the Ethiopian kingdom which had its capital at Napata, far up the Nile . . . After a victorious campaign in Egypt Piankhi withdrew to Napata as suddenly as he had come, and left Osorkon III ruling at Thebes, side by side with a number of other petty dynasts in the Delta . . . About 712 B.C. the Ethiopians again attacked Egypt and one of them, Shabaka, brother of Piankhi, assumed the throne as first ruler of the XXVth or Ethiopian dynasty."

It is possible to test these rival conceptions alike by the historical probabilities and by some testimony which is not generally used in this connection. The idea that Seve was a small dynast runs counter to several considerations which naturally suggest themselves. It is surely strange that Piankhi should have retreated without reason, if, as we know from the subsequent history, Ethiopia desired to establish herself permanently in Egypt. Why should she evacuate a country suddenly, merely to reconquer it a few years later? But if Seve was Piankhi's tartan we have a very good reason. In 720 B.C. there was a pitched battle at Raphia in which Sibe and his allies were heavily defeated. According to the Assyrian inscriptions "Sib'u fled alone like a shepherd whose sheep are stolen, and disappeared." That would mean that Piankhi's rule over Egypt came to an end as the result of the destruction of the forces commanded by Sibe, his viceroy or commander-in-chief in that country. This makes Ethiopia's course of action much more intelligible.

¹ E.g. Petrie, *History of Egypt*, III, 2nd. Ed., 1918, p. 283; Hall, *Ancient History of the Near East*, 1st Ed., 1913, p. 471 f.; *Cambridge Ancient History*, III, 1925, pp. 274 ff. On the probability that the name is Ethiopian, see E. Möller, "König Sib'u," "סִיבּוּ", der ägyptische Gegner Sargons," *Orientalistische Literaturzeitung*, XXII, 1919, pp. 145 ff.

² E.g. Peet, *Egypt and the Old Testament*, 1st Ed., 1922, p. 173; A. T. Olmstead, *History of Assyria*, 1st Ed., 1923, p. 204.

³ *Op. cit.*, p. 169.

Other circumstances seem to favour this idea. When we read that after the defeat of "Sib'e, the tartan of Egypt," at Raphia, "Pir'u, king of Egypt," sent tribute to the Assyrians, the most likely inference is that, as the result of an Ethiopian defeat, Osorkon or some other Delta dynast promptly transferred his allegiance to the Assyrian king. The striking contrast between the clemency displayed to the Egyptians by Piankhi and the savage cruelty appearing in the story that Shabaka on the reconquest of Egypt burnt Bocchoris alive, suggests that the policy of showing mercy to the Egyptian kinglets had not been justified by results. From the Ethiopian point of view the probabilities are all in favour of the identification of Sibe with Piankhi's tartan.

Similar conclusions must be reached from the standpoints of Hebrew and Egyptian policy. If Hoshea sent for help in a struggle against the mightiest state of the day and obtained it, we may reasonably infer that his request was addressed to a potentate who would have the will and the ability to assist him.¹ "No foreign monarch would send to the king of a mere city or district for help in resisting the greatest power of the age; nor can we suppose that any local dynast either had sufficient troops for a war in Syria or could leave his territory denuded and at the mercy of his rivals while they were sent on a foreign campaign. Hoshea's Seve can only have been the authority that controlled the resources of a great power. There was none such in the valley of the Nile except Ethiopia."²

The designation of Sibe as king of Egypt in the Hebrew narrative and "tartan of Egypt" in the Assyrian inscriptions testifies to the same effect. Biblical Hebrew often refers to a high representative of a ruling monarch by the title "king," so that on this view no difficulty arises: but it is less easy to understand how an independent Egyptian dynast—if that was Sibe's real position—came to be the commander-in-chief of some other Egyptian dynast a few years later.

A difficult chapter of Isaiah's referring to the Ethiopians appears to me to throw some further light on the subject. Oracles of the Hebrew prophets foretelling events in the immediate future may be used with confidence as historical sources, for it was a recognised principle that a prophecy was only to be accepted as genuine if it was fulfilled (Deut. xviii, 21 f.). Naturally this could only apply to predictions of events that were to happen within a short space of time: but the principle is such obvious common sense that we cannot doubt that it was regularly enforced. Hence, when we find that an oracle relating to the course of the next few months has been handed down as genuine, we may feel sure that actual happenings were substantially in accord with its predictions.

Isaiah xviii runs as follows:—

- "1. Ah, the land of the rustling of wings which is athwart the rivers of Ethiopia:
- "2. that sendeth ambassadors by the sea and in vessels of papyrus upon the waters.

"Go, swift messengers, to a nation tall and smooth, to a people terrible from their beginning onward, a nation that meteth out and treadeth down, whose land the rivers divide!

¹ Cp. the contemptuous descriptions of the Egyptian king to whom the rebels of 713 appealed and of his people—"a prince who could not help them," "a people that cannot profit them, that are not a help nor profit, but a shame, and also a reproach."

² H. M. Wiener *The Prophets of Israel in History and Criticism*, 1923, p. 33. Hall's present view (*Cambridge Ancient History*, III, p. 276, note) that the statement in Kings really refers to 720 B.C. is quite incompatible with its tenour.

- " 3. All ye inhabitants of the world, and ye dwellers on the earth, when an ensign is lifted up on the mountains, see ye: and when the trumpet is blown, hear ye!
- " 4. For thus hath the Lord said unto me, I will be still and I will behold in my dwelling place; like clear heat in sunshine, like a cloud of dew in the heat of harvest.
- " 5. For afore the harvest, when the blossom is over, and the flower becometh a ripening grape, he shall cut off the sprigs with pruning hooks, and the spreading branches shall he take away, shall he cut down.
- " 6. They shall be left together unto the ravenous birds of the mountains, and to the beasts of the earth: and the ravenous birds shall summer upon them, and all the beasts of the earth shall winter upon them.
- " 7. At that time shall a present be brought unto the Lord of hosts of a people tall and smooth, and from a people terrible from their beginning onward; a nation that meteth out and treadeth down, whose land the rivers divide, to the place of the name of the Lord of hosts, Mount Zion."

From this it appears that Ethiopian ambassadors had come to Jerusalem and were seeking to induce Judah to enter on a struggle as an ally of the Nile power. Isaiah puts the refusal and the future course of events very delicately, yet the declaration of Jewish neutrality is unmistakable: "I will be still and I will behold in my dwelling place." This people would not join in the war. And the declaration is couched in terms which forbid the assumption that the northern kingdom was still in existence and engaged in the contest. For the Lord was the God of Ephraim as well as of Judah, and had the former power been waging war Isaiah would not have said, "thus hath the Lord said unto me, I will be still." Now there was only one occasion on which a Nile power intervened in Palestine against Assyria before the end of the northern kingdom. That was when Hoshea rebelled against Assyria and entered on the struggle which led to the extinction of his state. Isaiah xviii obviously cannot refer to that period for the reason given. Hence it falls later.

It is to be observed that the prophet here foretells that a battle with very heavy casualties will be fought before the harvest, and we have seen that his anticipations must have been realised for the oracle to win acceptance. We have therefore to ask on what occasions during the period of Isaiah's activity there was a struggle between Assyria and Ethiopia in which Judah was neutral.¹

There is only one conjuncture that satisfies the conditions, viz., 720, in which the battle of Raphia was fought. This therefore fully confirms our former inference that the tartan of Egypt on that occasion was no other than Piankhi's commander.

This result has a bearing on the chronology of the period. If Seve was Piankhi's tartan, the Ethiopian descent into Egypt must antedate Hoshea's conspiracy, and it becomes impossible to refer the first Ethiopian conquest to so late a period as 720 B.C.²

HAROLD M. WIENER.

(*To be continued.*)

¹ Olmstead's statement (*op cit*, p. 297), that Hezekiah 'had taken part with the enemies of Assyria in 720,' appears to have been made by inadvertence. In his account of these events (p. 207) he speaks of the northern Judah (Iaudi), which, of course, had no connection with Hezekiah's kingdom.

² Reisner (*Harvard Theological Review*, XIII, 1920, p. 31) puts Piankhi's descent between 734 and 712 B.C.

JOURNALS.

Annales du Service des Antiquités. Tome XXV.

PILLET, M.—*Rapport sur les travaux de Karnak* (1924-5). The inundation was nearly a metre higher in the eastern side of Karnak than it was near the Nile, and it persisted longer. Evidently the flooding and much of the salt is due to an eastern flow.

The pedestals of the sphinxes on the western quay have been cleared; they are inscribed by Painezem, son of Paonkhy. The dangerous state of the foundations of columns led to a partial examination of the original paving, in the lower course of which were blocks of Akhenaten. It is estimated that there are 170,000 blocks, which may be of that king. Some monuments of Neitaqert have been found.

LEFEBVRE, G.—*Le grand prêtre d'Amon, Harmakhis*. Inscriptions of this high priest contain the names Tabakenamen, a queen, and Pyonkharty, a royal daughter and queen of Shabataka. This queen's name was also that of the queen of Tanutamen on the Dream stele, possibly the same person.

LEFEBVRE, G.—*Une version abrégée de la "Stèle du Mariage."* This is an alabaster copy of the well-known Hittite marriage inscription of Ramessu II. The block was 13 feet high, now broken in three pieces. While in most parts a rather simpler version of the Abu Simbel stele, there are also connections to the Abu Simbel Ptah inscription and that of the princess of Bakhtan. The text is published here, with translation and commentary.

LEFEBVRE, G.—*Note*. This quotes a passage of Rekhmara about his steering the ship of state, and therefore agrees that a similar metaphor in the biographies of Roma and Bakenkhonsu also applies to this life. This was already suggested in the summary in this Journal (1925, p. 126).

LUCAS, A.—*Damage caused by salt at Karnak*. This difficulty is discussed from the chemical point of view. It is believed that the salt mainly comes from washing out lands further south. It is suggested to remove the salt from stone by applying damp cloths; the crust of damp sand, left to dry on, would be far more effective and easy to apply.

JÉQUIER, G.—*Fouilles exécutées en 1924-5 dans la partie meridionale de la nécropole Memphite*. The work was mainly on the avenue of the pyramid of Senusert III, and on the Mastabat Faraoun. The chapel of the latter was traced out, and is here planned: it is probably of Shepseskaf. The "rhomboidal pyramid," or double-slope pyramid of Dahshur, has been re-opened; the piled-up blocks in the great hall are found to cover only the rock cutting, and not to hide a chamber. The survey of it in *A Season in Egypt*, pp. 28-32, does not seem to be known.

BRUYÈRE, B.—*Stèles trouvées à Deir al Médineh*. These are not of historical interest; the names are Amenemant, Ahut, Pa-her-pedti dedicated to Shed, Hor-em-uaā, Baka, Penamen, Khoemuast, Neferhetep, Bay, Mentu-Min, Nebnefer, Roma, Sherat-ra, Ramessu VIII, Pasithoy, and Apuy. Some ear-steles like those at Memphis occur here. The connections with other steles of the *sedem osh* series in museums are noted.

WAINWRIGHT, G. A.—*Painted box from Kom Washim*. This oval wooden box, and the glass bottles with it, are closely like those in the group in *Hawara*, XIX.

WAINWRIGHT, G. A.—*Wooden door and stool from Kom Washim*. The door has narrow panels let into grooves, as in modern joinery. Pieces of similar work are at South Kensington. The stool has a massive turned block for the top, like one in University College, with the legs joined on by a hidden dovetail.

WAINWRIGHT, G. A.—*Turnery, etc., from Kom Washim and Gerzah*. These pieces are furniture legs of Roman age, like those in University College. The origin of turning is discussed, as being derived from the use of the bow drill. It should be added that, though the early stool legs are not turned, but hand-worked, yet the pattern is obviously copied from turned work in the XIXth dynasty. A small box (University College) is clearly turned, of the XVIIIth or XIXth dynasty, and the lid of it has intersecting circles of Syrian style. This suggests that Syrians turned, and Egyptians clumsily copied.

WAINWRIGHT, G. A.—*Hoard of Silver from Menshah*. This hoard from Ptolemais is dated to Nero by the coins. There were long square ingots of silver alloy, 6·3 inches by 0·4 by 0·4, containing half silver. The bracelets are (1) plain tubes with ends coiled round the stem to form a sliding joint; (2) plain, with ends not touching, lion-head terminals, and herring-bone hatching; (3) close spirals of wire with separate end caps to hold the wires; (4) spirals of twist of wires, to give greater elasticity for opening. Many references to jewellery, and a discussion of the new styles coming in from the west, may help future study. Note the only pearls found in Egypt, of Aoh-hetep (p. 132).

WAINWRIGHT, G. A.—*A dagger of the early New Kingdom*. This is a comparison of the thirteen examples of daggers with inlaid handles from Egypt. They are Syrian in origin, the handle being also found in Assyria.

WAINWRIGHT, G. A.—*Antiquities from Middle Egypt and the Fayum*. A bronze two-spout lamp with loose lid, like one in University College. A little tablet from Lahun inscribed "Houses 4 of 30 × 20." Houses of this number of cubits were laid out in two of the streets of Kahun. Four-headed lazuli ram from Herakleopolite nome, and therefore of Hershefi. Small glass jug, with a whorl on the side of it, placed for stamping as a measure.

FIRTH, C. M.—*Excavations at the Step Pyramid, Saggara, 1924-5*. The names of two princesses, Ant-ka-s and Hetep-her-nebti, occur on pieces of steles in the filling of foundations of the chapels, supposed to have been steles marking boundaries before the building. The serdab of the pyramid temple, though unroofed, contained the seated figure of Zeser, quite complete except for two slight flakes on the wig and some weathering of the face; it is astonishingly preserved considering the exposure. The flesh is yellow, hair black, cloak white; the inlaid eyes have gone.

Another shrine, on the north of the pyramid, had two porticoes of fluted columns. In the ruins were fragments of the beard of an alabaster statue. A dump-heap of ancient clearing of the pyramid passages contained an enormous number of fragments of vessels of diorite, breccia, slate, alabaster and white marble, with names of kings earlier than Zeser.

The history of the various tunnels cut in attacking the pyramid is traced out. It is concluded that the great central pit was filled with stone, which plunderers removed, and that they put in the beams of wood at the top to support the pyramid stones. This view involves difficulties, and, looking at the use of beams of wood in construction at Meydum, this woodwork might well be original.

A large building of the IIIrd dynasty was cleared, south-east of the Step Pyramid. This had a large courtyard with a row of small chapels along the

sides. Pieces of statues were found in the ruins. A building on a platform had slender fluted columns, with fluted pendants at the sides, and a block in the middle, rather suggesting unfinished Hathor heads and wigs. The long ridges of rubbish behind the Step pyramid are rubble structures, once faced with masonry, over long subterranean galleries in the rock.

LEFEBVRE, G.—*Une Table Eucharistique*. An oval slab of marble, 18 by 10½ inches, has incised on the top **ΥΓΙΑΙΝΩΝ ΦΑΓΕ ΚΥΡΙΚΟΝ**, in lettering of the IIIrd or IVth century. It has doubtless been the top of a small table used for the eucharist; the inscription is rendered "they that are whole eat the Lord's (Supper)" (see Luke v, 31). The size is far too small for a meal like the Agape. This was found at Tell Ebshan, near Tantah.

WAINWRIGHT, G. A.—*Three stelae from Naq ed Deir*. (1) Figures of three persons seated are named Priest Arnes, Priestess of Hathor Shemaât, and southern mayor Skhemsen; two dogs are before the last. (2) Two seated persons are the judge, conservator of waterways, southern mayor, Apa, and his wife Maut. (3) Standing figure of Nesi-Ra, called beloved by his father Senu; he was an official of Edfu, so the stele may have been brought from there, especially as the style of it is much ruder than the others.

ENGELBACH, R.—*On the size and orientation of the Great Pyramid*. This summary of the Survey paper by Mr. Cole describes the measurements taken from the lengths of casing now uncovered. The method, however, was hardly sufficient, as long-distance sighting along a weathered edge is too uncertain for carrying on the sides; it is to be hoped that a full hand-measurement on many points of the casing lengths will be made. Meanwhile the dimensions across the pyramid agree with the last survey in 1881 to about an inch.

BRUYÈRE, B.—*New details for insertion in the Theban 1/1000 scale maps*. These are of tombs, 335 of *sedem osh maot* Nekhtu Amen; 336 of *sedem osh* Neferrenpet; 337 of Qen; 338 of the sculptor of carvings of Amen, Moya; 339 of *sedem osh* Huy and Pashedu; 340 of Amenemhet.

GAUTHIER, H.—*Le roi Zadfré*. The position of this king, whose pyramid is at Abu Roash, is variously stated in lists, and a newly discovered tomb of Nesutpu places him before Khofra. There were evidently co-regents adopted by the long-lived pyramid kings, who died before them, as Khnumkhufu with Khufu, and Zedefra with Khofra, perhaps also Shepseshaf with Menkaura. This arrangement would render possible the recorded private lives overlapping so many reigns. Rhatoises is credited with 25 years in Manetho, but M. Gauthier quotes 8 years for Zedefra from some hitherto unrecognised piece of the Turin papyrus.

KUENTZ, C.—*La "Stèle du Mariage" de Ramsès II*. Two new copies are here published parallel with the first text at Abu Simbel. These new copies are at Elephantine quay, on four blocks of stone which give much of the text, and at Karnak on the south face of pylon IX. Thus it is evident that Ramessu II was proud of his new diplomatic connection. All of these copies are very imperfect, and hence the great value of several texts. Altogether out of 45 lines of text only 7 are partially in the three copies, 34 lines depend on two copies, and 4 lines at the end are lost from all copies. The differences between the copies are only such changes of arrangement as an engraver would feel were at his discretion, in order to avoid joints or to adjust the length of a line. The Abu Simbel copy is almost complete down to the 41st line; then there are 5 lines more or less broken in the other two copies. These latter lines describe the astonishment of foreign chiefs

in seeing Egyptians and Hittites peacefully mingled, and the reception of the princess with great presents without number, the pleasure of Ramessu, who loved her more than all, and who gave her the name of Maat-nefru-ra, "beholding the beauties of Ra." In discussing this name it is overlooked that in 1905 the meaning was pointed out, this name of the last hour of night being "Dawn," referring to the dawn of a new era of peace on the frontier, and the dawn of a new relationship of the royal houses.



DAVIES, N. DE G.—*New details for insertion in Theban maps.* These are the tombs of Nekht-Amen, wife Kamena; Tehutimes, mother Tabenert; Benaâ, otherwise Pa-heqmen, father Artanena, mother Taruka; and Piaây, wife Taurt.

GUNN, B.—*A sixth dynasty letter from Saqqara.* This letter was found with other waste papers in a room in the temenos of the Step Pyramid. It is dated in the 11th year, almost certainly of Pepy II, by the other papers. The writer is an intendant of the soldiers, who was directed by the Vezier to bring the battalion employed at Turra to receive clothing. He is in an out-of-the-way place, where the post only comes by the stone barge. When he was six days at the Residency with the soldiers no clothing was supplied, and now it will spoil work for a whole day to go up for the clothes. So he replies thus by the post (on the stone barge). This shows a business-like determination to push on the work, and not to have it stopped by official mismanagement.

EDGAR, C. C.—*Engraved designs on a silver vase from Tell Basta.* This vase was part of the treasure found in 1906, and could not be completely published till it was cleaned. It is engraved with two bands of figures. Above, are desert scenes of six groups of wild animals, separated by plants of a composite form more like a bouquet. The circles of dots round a central spot are strongly foreign, and suggest a Syrian artist. The lower band has the familiar papyrus skiff with farm produce, and scenes of fishing and fowling. The treatment of these bands is so different that it suggests two artists being employed. Round the shoulder is a prayer "May thy *ka* be with thee in life and welfare, making thee great of years, for the *ka* of the royal letter warden Tem-em-ta-neb, in peace," and a variant on the opposite side. The owner is standing in adoration before an unknown goddess, probably foreign.

WAINWRIGHT, G. A.—*Statue of Horus, son of Kharu.* The figure, made of yellowish quartzite, is kneeling, holding a shrine of Osiris. He was in the foreign service, and the name, son of the "Syrian," is significant. His mother was Mer-en-Neith atf-s ("beloved of Neith is her father"), whose good name was Nefer-ab-ra in Thebes. This dates it to the close of the XXVIth dynasty.

Académie des Inscriptions. Comptes Rendus, 1925.

JÉQUIER, G.—*Le mastabat-el-Faraoun.* The casing of this was of granite below, and of fine limestone above. The only inscription of importance was a relief from a tomb of the XIIth dynasty, naming a worship of Shepseskaf; this had been re-used in the paving of the funerary chapel, apparently, therefore, in a late restoration. Fragments of the throne of the royal statue have the end of a cartouche, with  and part of a  over it; this would agree with either Shepseskaf or Userkaf. The difference of the form of this tomb from the pyramids gives rise to some pages of speculation on the religion. If, however, Shepseskaf was a co-regent of Menkaura, that would be a sufficient cause for his not being granted a pyramid, seeing the difficulty that Menkaura had in completing his own equipment.

KUENTZ, Ch.—*Une nouvelle édition du "Poème de Pentaur."* This rhapsody of Ramessu II is best known by the name of Pentaur, who was merely the scribe of one copy. Parts of eight copies have now been identified, and a complete edition of the variants is in prospect. One copy mentions places on the way to Qedesh, including the "Valley of the ash tree" known in the tale of Anpu and Bata. Dussaud adds that the position indicated is that of the Eleutheros valley.

NAVILLE, Ed.—*L'or bon d'Égypte.* Gold coins with the figure of a galloping horse and *nub nefer* have been rarely known until a find of 38 examples at Kom Aziziyeh, near Memphis, six years ago. These were nearly all between 129·0 and 131·0 grains, or the usual daric. One roughly cut square piece is of 137·5 grains, as if the *qedet* was the original standard. Three different dies were used for the three coins figured, so the issue must have been considerable. M. Chassinat would date these between 404 and 342 B.C. As Greek mercenaries, for whom a gold coinage would be wanted, were mostly employed under Zeher (Teos) 360 B.C., this is the most likely date of issue.

Revue Égyptologique. Vol. II, fasc. 3-4, 1924.

GAUTHIER, H.—*Un groupe Ptolémaïque d'Héliopolis.* This is of "black stone" 6 inches high, on an alabaster base, representing Hapi-em-heb and his wife Onkhes-ne-Ast seated together. There are nine priestly titles of the father and of his son Pa-shed-amher, and three others of the wife, all referring to Atmu and to Heliopolis.

SOTTAS, H.—*Notes de philologie égyptienne.* These are on the auxiliary *uāh*; the name Nehem-es-Ah, here rendered "saved by Aāh," the moon; a passage in Westcar 8, 17; the name of the Fayum.

WEILL, R.—*La "Kite" d'or de Byblos.* This describes a piece of bent sheet gold with a section of pattern on it, apparently cut from some object. It weighs 9 grammes, and as this is about the *qedet* weight, it is proposed that this was a weight. It is suggested that it was part of a uniform bar, cut up in lengths for giving a unit of value. The writer does not notice that if this idea holds good, the pattern is not made to agree to the *qedet*, but a unit of pattern would be 1/10th short of that, or just about the Babylonian shekel. It seems doubtful, however, if any unit of weight was intended.

MORET, A.—*Maspero et les fouilles dans la Vallée des Rois.* This address was the opening of the course of Egyptology at the Collège de France, which was suspended at the death of Maspero. It describes the various stages of excavation at the tombs of the kings for a century past.

LEXA, F.—*Les ornements poétiques du langage dans les monuments littéraires des Égyptiens anciens.* This paper collects examples of nineteen different forms of rhetorical expression.

JOUGUET, P.—*Une lettre de l'empereur Claude aux Alexandrins.* An account of the letter published by the British Museum.

In the *Notices* is a short biography of the lamented Turaiev, who died "of inanition," in the Russian capital; also a notice of Chvostov the papyrologist, who, after being "without books, without paper, without ink, isolated from the whole world," has now perished. Truly "the Russian savants disappear, exterminated by famine."

In *Comptes rendus bibliographiques* are reviews of six works on demotic and Greek papyri, mostly on Oxyrhynchos.

Revue de l'Égypte Ancienne. Tom. I, fasc. 1-2, 1925. (The new successor of the *Recueil* and *Revue Égyptologique*.)


BÉNÉDITE, G.—*Une petite tête royale en pâte de verre.* This head in a plain wig, about three inches high, is of pale violet glass for the face and dark violet for the hair. It has a gracious but weak face, of the latter part of the XVIIIth dynasty, which is here compared with Tut-onkh-amen. It is a pleasing piece of art which suits the character of the Louvre collection.

BOREUX, C.—*Un bas-relief au nom d'une princesse royale de la IV^e dynastie.* This slab was found in 1902 by Mr. Ballard, excavating in a tomb close to the pyramid of Khafra; it passed through some collections into that of Mr. Curtis. Unfortunately this was a dealing excavation and nothing seems to have been published about it. The royal connection of Nefert-abt is therefore unknown, but probably she was a daughter of Khafra. It is the usual type of false-door panel, with careful colouring.

DRIOTON, E.—*Un mot nouveau copte.* On an ostrakon occurs a word ⲉⲧⲁⲣ in the name of a garment or piece of cloth.

MORET, A.—*La campagne de Sêti I^{er} au nord du Carmel.* The excavations of Bethshean by Mr. Fisher for Philadelphia have produced two steles of Sety I, one of Ramessu II, and a seated figure of the latter. The first stele names the Sati, Retennu, Aamu, Aperu and Tuir(sha?). The second stele records a campaign in the 1st year of Sety to recover Palestine. This began by occupying Kharu from Zaru at the frontier to Pa-kanaan, as recorded at Karnak. Next was the recovery of the upper Retennu, from the north of Carmel to the sources of the Jordan; on the coast Akka, Tyre, Simyra, and inland Yenoam, Hamat, Rahubu, Pahira, Bethshean, as on the new stele. Lastly, the triumphal return, as figured at Karnak. In the Retennu campaign news came that the people had gathered in Hamath and united with those of Pahira (Fahil) to take Bethshean, and besieged the chief of Rahubu. Sety sent separate corps to Hamath, Bethshean, and Yenoam, and occupied them all. The various lists are collated which refer to these places. Hamath is on the Sea of Tiberias; Rahubu, or Rehob, between that and Carmel; Bethshean is known; Pahira is Fahil, south-east of the latter; Yenoam is inland from Tyre.

NAVILLE, E.—*La plante magique de Noferatum.* This is a discussion of a figure of the plant on a block from Horbeyt, representing the root also. It is a lotus, as named in various texts. The personality and nature of Neferatum is largely dealt with, also the *mehti* Horus in a barque, referring to the dual Horus and Set at Antaeopolis.

WEILL, R.—*L'unité de valeur* Ⲡ , *Shat.* After referring to the examples of super units, such as 2 qedet, 2 nub, 5 qedet, and others, the shat is studied, and it is concluded to have been a money of account, a term of valuation. Its equivalent is shewn to be 12 shat = 1 deben of gold. The papyrus of accounts (Bulaq, II) is transcribed and translated, showing how everything was reckoned in shat. The shat being 12 to the deben must have been between 115 and 127 grains of gold in weight, and its identity with the shekel is pointed out. Curiously, no notice is taken of the Aramaic שֵׁט *shet*, six, or sixth, which points to a tenth of the manah as the original unit. This sexagesimal system strongly enforces the shekel origin of the shat. In short, for business the Egyptian kept his accounts in Babylonian shekels, from the Old Kingdom onwards. Some important values of goods in gold are stated; remembering that the shat was closely equal to

our sovereign, the ox or cow cost 8 shat, or 6 shat; a goat or the leg of an ox, $\frac{1}{2}$ shat; $\frac{5}{8}$ of a pint of honey cost $\frac{1}{2}$ qedet, about 12 shillings. Thus, while meat was only $\frac{1}{4}$ or $\frac{1}{6}$ of our price, honey was eight times as dear as now. The relative values of gold and silver were 2 : 1 in Hyksos times, or 20 : 11 in the XVIIIth dynasty. The values of gold and copper are very divergent—48 : 1 or 240 : 1.

GUÉRAUD, O.—*Un nouveau papyrus de l'Odyssée*. This contains a part of book ix, 212–end, and x, 1–96, but with large gaps. As this is written in the good round hand of about 225 B.C. it is authoritative. There does not appear to be any large departure from the usual text; but the marginal numeration suggests omissions of lines in the missing parts. Each hundred lines of a book was numbered and a tick placed against each tenth line. Yet there is no mark at the beginning of book x. There seem to be traces of two types of text, one of which the copyist knew by heart and corrected by a written text.

CHASSINAT, E.—*La Princesse Noubentckh*. Besides the vase in Turin named by M. Gauthier, there is a similar vase in the Louvre and a steatite plaque. See the *Catalogue de la Salle Historique*, Nos. 391, 643.

Mémoires de la Société royale des Antiquaires du Nord, 1920–1924. The more important papers are issued every few years, and this last series contains some material touching on Egypt. M. Chr. Blinkensberg discusses *Le pays natal du fer*, carefully excluding native and meteoric iron. The inscriptions are quoted naming Zeus of Doliche in Commagene as the source of iron. This was an old Hittite town, and the Zeus was the successor of Teshub the thunder god. A clay tablet from Boghazkeni has a copy of Khattushil's letter, replying to Ramessu II asking for iron, and saying that he had no stock, but had ordered some to be made, and meanwhile sent a dagger as a present to Egypt. This seems to show that about 1250 B.C. the Hittites were occasionally making iron for special uses. This would agree well with the traditional origin among the Chalybes, whence *chalybs* steel. Strangely it is remarked that the origin of the Greek word *sidēros* is unknown, it is not Greek nor Semitic, but may be Hittite. It seems probably from *sidus* a star, hence *sidereus*, and *siderites* magnetite, because looked on as meteoric iron. That the word *sidus* is Latin, points to the Greeks having got the term for iron through Illyria in contact with the iron mines of Noricum.

A long and important paper by Prof. Sophus Müller deals with *Communautés stylistiques en Europe dans le récent âge de la pierre*. It describes the various localities of the black pottery with bands of pricked lines filled with white, like the rare prehistoric Egyptian and the Hyksos flasks. This style is traced from the Persian Gulf and the Sudan to the Atlantic, the North Sea and central Siberia. "The earliest type appears clearly in South Italy and Sicily," with the angular forms to the east, and the spiral to the west of the Mediterranean. This indicates then a wide trade when we find fine spiral examples on the blackware of the XIIth dynasty (Kahun, Bernasht). Zigzag lines of dots belong to South Germany. The incised points and spirals are referred to south of Silesia, Balkans, and down to Thessaly; also found in southern Italy. The Maltese and Egyptian examples are not mentioned. The zigzag bands are widely spread from Portugal to Crete, and, we may add, occasionally in Egypt. The spiral line alone is quoted from Gerzean Egypt and Crete. The cord pattern is widely diffused, and it is so natural to impress a cord that it may have been re-invented a hundred times. This study, though valuable for Europe, would need long research in Asia to enable any certain conclusions to be reached about origins.

REVIEWS.

Bulletin of Metropolitan Museum, New York, 1926.

January. A headless basalt statue of Senusert I has lately been presented, and is described and figured by Dr. Lythgoe. It is of fine work, 41 inches high, seated on the usual cubical throne. As the king is "beloved by Horus, lord of Nubyt," it seems that it must have come from Ombos, where Horus was worshipped along with Set; if so, this is a very rare example of the early work there, which was blotted out by the Ptolemaic temple.

February. A fine figure in grey granite of Rahetep, a Vth dynasty official, seated on the ground, has been presented, and is figured and described by Mr. Lansing. This leads to a discussion of the fate of a great untouched serdab, found by Mariette's workmen, which contained nineteen statues, said to be arranged in a circle. The chamber, however, is only 4 feet wide, so obviously the statues must have been along the sides. Of these statues, fifteen are in the Cairo Museum, probably four were stolen, one is at Athens, and the figure described was bought long ago from a private collection in Cairo, and seems to have been the finest of all. Two others are still missing.

March. In consequence of the Director-General of Antiquities in Cairo requiring an illegal form of contract for excavations, the New York workers have ceased excavating in 1924-6, and have concentrated on completion of surveys and records. The tomb of Neferu, a queen of the XIth dynasty, has been cleared out, and the original entrance to it cleared behind Hatshepsut's portico. When the builders of the portico closed the tomb entrance, a narrow side entrance was made for visitors, and many *graffiti* of the XVIIIth dynasty are found on the tomb walls. This shows a careful attention to providing for ancient tourists. A perfect example has been found of the surreptitious figures of Senmut adoring, which he placed behind the doors of the chapels at Deir el Bahri. The balustrade of the stairway of Deir el Bahri, leading up the axis, has been found and restored at the lower ends. Foundation deposit pits there have been cleared. A large number of coffins of the XXIst dynasty belonging to the family of the Priest-kings have been cleared up and studied. Some objects and scenes from the papyri of these burials are illustrated here.

At Lisht the pyramid of Senusert I has been measured, as 200 cubits in the side, and the plan is published. Mr. Davies has been rescuing what is possible of the traces of inscription of Rehkmar, and copying various foreign groups from tombs of the veziers.

Die Bewaffnung des Altägyptischen Heeres. By WALTHER WOLF. 8vo. 108 pp., 22 pls. 1926. (Hinrichs, Leipzig.) 8M.

This work gives a very complete study of the actual usage of weapons, as well as the museum specimens and the drawings that remain. It appears to include almost all that can be produced on the subject at present, but not fresh explanations. The plates supply photographs of the weapons in Berlin, which are welcome. In the text are 71 figures, which are well chosen, and always in place with the explanations. A complete list of sources of the illustrations, and bibliography, add to the value. Altogether it is worth more than various pretentious volumes issued at many times this price. In addition might be noted, on p. 34, that the Syrian axes are cast in closed moulds, and far better designed than the Egyptian; on p. 56, add a sling of about the XXIInd dynasty at University College (*Tools*, LI); the strange form of club on p. 79 seems unexplained—is the crook at the side a finger guard? Lastly, on p. 98, the quantity of scale armour in the *Palace of Apries*, XVI, needs notice. On Tafel 14, No. 1 is like weapons datable to about the Xth dynasty in Egypt, made both of bronze and iron, and probably of Syrian origin; these will appear in the volume on Qau. We hope the author will issue more of such comprehensive and practical studies in other subjects.

Egyptian Religion and Ethics. By F. W. READ. Sm. 8vo. 152 pp., 6 pls. 1925. (Watts.)

The largest section of this book is occupied with the service of the dead, and ethics only occupy a brief chapter at the end. The treatment of the mythology gives a fair outline of some of the principal gods, but does not enter into much detail. The section on the dead only deals with the views of the after-life, in the Pyramid Texts and Book of the Dead. Of the repudiation of sins is it said that "there is no principle to be traced in the order," whereas the sins are classified in groups of five for finger mnemonics. No notice is taken of the essential purpose of the Book of the Dead as a popular ritual, and the Pyramid Texts as a royal ritual. The *nesut-da-hetep* formula is not referred to the chief's property in all land, whereby it could not be alienated without royal permission. The god also gave the endowments, because such were devoted in the first place to the god to prevent alienation, and the dead fed at the altar of the god, as stated on a heart scarab. Though there does not seem to be any fresh view stated in this volume, it gives a handy summary of various matters fairly up to date.

NOTES AND NEWS.

A REMARKABLE stele in Turin has not yet been brought into the Akhenaten debates. It is figured in LANZONE, *Diz. Mit.* CXXXIX, and described in LANZONE, *Cat. Turin*, p. 155. It represents two supreme goddesses, seated facing, named Aritnefert and Neferiyaita. It seems obvious that these are Aohmes Nefertari—so often worshipped—and Nefertytai. Yet the former is called Lady of heaven, mistress (*hent*) of both lands; and the latter is Lady of heaven, mistress of all the gods. Each has what Lanzone calls a modius on the head, and the uraeus on the front of the wig. Below these deified queens are a man and wife kneeling, and a son and daughter. The dress of the kneelers is not Amarniote, and hardly before Heremheb, probably XIXth dynasty. The names Pendua or Qen, Tair or Tari, Huy and Tant-nub, are not necessarily later than the end of the XVIIIth, but might be early in the XIXth. There is no doubt that this stele is Theban, as the man was *sedem osh en ast maot*.

How much does this imply? The adoration of Nefertytai at Thebes, and calling her the mistress of all the gods, is impossible during Atenism, and seems clearly to point to her siding entirely with the Theban party of polytheism. The period of the stele should be defined by a detailed comparison with dated dress and names, but it seems to be about Sety I. If so, Nefertytai must have been worshipped as a main mover in the break-up of Atenism and restoration of polytheism. This would agree with Mr. Davies' suggestion of the queen rebelling and going to Thebes. Here Nefertari, being the heiress who united the kingdom, is adored as mistress of both lands, and Nefertytai is adored as the mistress of all the gods by restoring their worship.

This use of the word *hent* (mistress) suggests that it has the sense of *hen*, "to guard"; the guardian of both lands, or of the gods, would be a reasonable title. The other *hen* words, as applied to a bowl, a horn of cattle, or a spear, could also be given from the sense of guarding.

Five great scholars have passed away lately. In England we have lost Bernard Grenfell, after a long, sad, eclipse owing to his health. One of the most active and zealous workers, he became the leading authority on the Greek papyri which he discovered. Beginning by study at Koptos in 1894, he was for many years the main spring of the great flow of documents from the Fayum, which have re-inspired classical studies, and with which his name will always be linked.

Valdemar Schmidt of Copenhagen was a familiar and welcome friend in England, with a long record of work, both in the East and in his own land. Though nearly ninety, he had continued his visits here until last summer.

Georges Bénédict had long presided in the Egyptian section of the Louvre, and was the principal authority in succession to Maspero.

Signor Casanova was well known in Arabic studies, and his catalogue of Arabic glass weights is a familiar work of reference.

Aaron Ember, professor at Baltimore, has perished, with his family, in a terrible fire. His work on Semitic and Egyptian languages has been mostly lost.

At Gizeh the royal tomb proves to be that of Hetep-hers, who was royal mother, wife, and daughter, according to the gold hieroglyphs of inlay which have been found. It is presumed that she was mother of Khufu, but whether Shaaru or Sneferu comes into the previous generation is not yet seen. The clearance of the small chamber is extremely tedious, owing to the decay of organic material and the layers of minute pieces that have to be recorded and photographed in position. Dr. Reisner has been assisted in this by various students. The objects are of surpassing delicacy of detail.

At Thebes a temple of Akhenaten has been found, with statues of the new art, and therefore maintained at the same time as Amarna.

Mr. Mond's party at Thebes have found two chambers piled up with coffins of priestesses of Amen, about thirty-five in number. As these date from the XVIIIth dynasty, they will be of more interest than the priestly burials hitherto known.

The withdrawal of the great offer of endowment of archaeology in Egypt by Mr. Rockefeller is a sad loss to science. As the Egyptians have caused this by their objections, it is now incumbent on them to provide two millions for the housing of their treasures—found by other people—and to find a staff of experts of their own nation to administer such a department. It is futile to refuse help if the work cannot be done otherwise.

The catalogue of *Weights and Measures* at University College is now ready, and can be obtained there from the Secretary of the British School.

The Annual Exhibition will be held, July 5th to 24th, at University College, hours 10 to 5, and evenings of the 14th and 23rd at 6.30 to 8.30. The discoveries of Miss Caton-Thompson in the Fayum, of Mr. Sandford from the Nile gravels, and of Mr. Mackay from Bahrein, will all be new materials of much importance for early archaeology.



ANCIENT EGYPT.

AN ANCIENT SURVEYING INSTRUMENT.

A SHORT time ago, while looking through a miscellaneous collection of objects at the premises of the Egyptian Exploration Society, I came across a portion of a "groma" or ancient surveying instrument.

The "groma" (from the Greek *gnomon*, through the Etruscan) consisted of two rods fixed at right angles to each other. From the end of each rod a plumb-line was suspended. The instrument was supported by means of a cord loop or by an offset pillar (the *rostrum*) so as not to interfere with the line of sight across the diagonal plumb-lines.

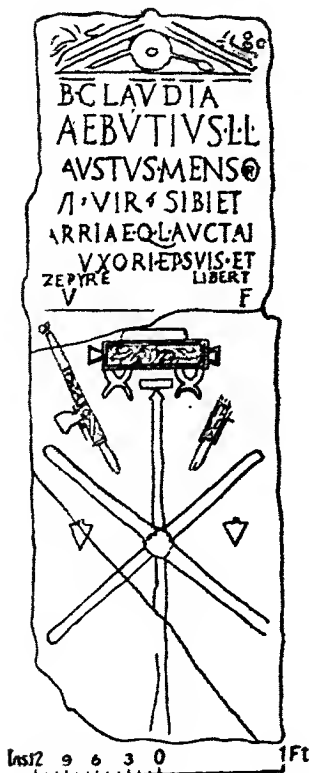


FIG. 1.

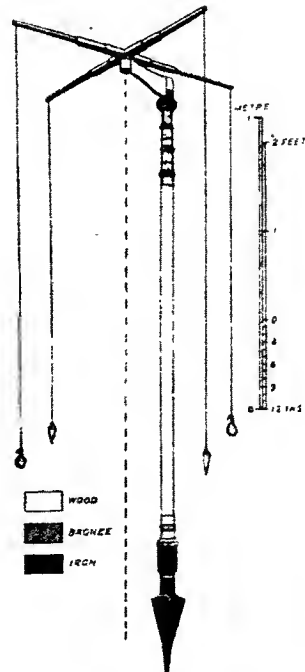


FIG. 2.

The apparatus was regularly used in Roman times for setting out straight lines and for determining directions at right angles to one another in land measurements as well as in building operations. The *rostrum* was firmly fixed in the ground in a convenient place ("The place of the Groma") and had to be railed off to keep interested spectators at a distance. Roman surveyors were called *Gromatici*, and there are several references to these instruments in the literature.

Frontinus¹ describes one consisting of a flat plate pivoted on a stand. Plumb-lines were hung from the corners.

"To use the instrument, we must steady all the plumb-lines and look at the cords or strings stretched by the weights, setting them in line until the eye sees the nearest one only. Then put in the stakes and, having carried the apparatus to the last stake, set it up as before and look at the stakes in the opposite direction by way of a check. Then, to continue the staked-out line when intersected by obstacles, carefully set out the right angles given by the plumb-lines by perpendicular lines at every point of interception."

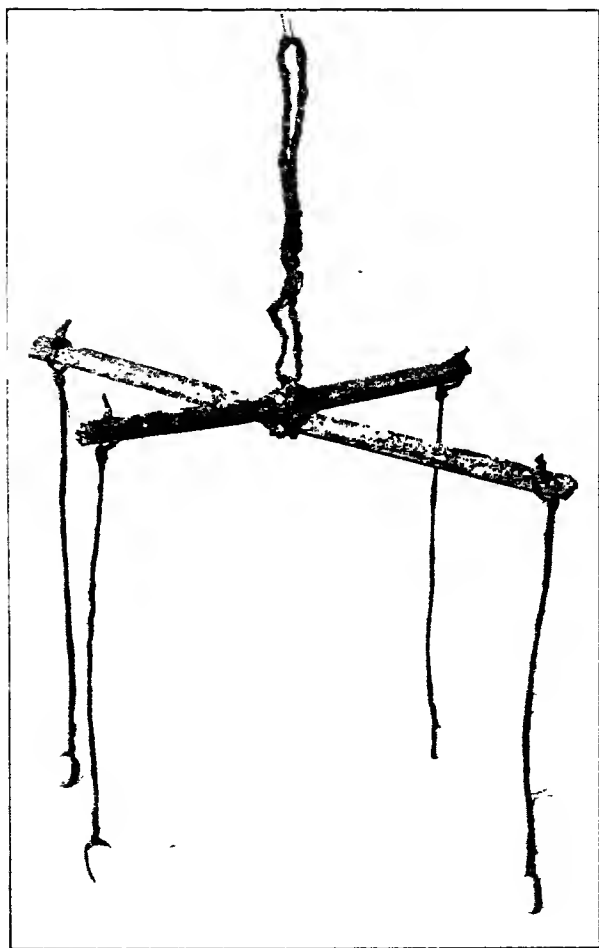


FIG. 3.—1:3 GROMA FROM THE FAYUM.
THE PLUMMETS HAVE BEEN RESTORED.

A representation of a "groma" occurs on a tombstone (*see* Fig. 1) (found near Turin) of a Roman "Mensor," and the remains of an actual specimen were found at Pompeii in 1912. This was reconstructed by Della Corte² and is represented in Fig. 2. There is a full-sized model in the South Kensington Museum. An

¹ *Gromatici Veteres*, Lachmann & Rudorff, 1848-52. Frontinus (A.D. 100) was an engineer of the Roman water supply and at one time Governor of Britain before Agricola.

² "Monumenti antichi," *Acc. dei Lincei*, XXVIII. In this article M. Della Corte discusses the so-called Bavarian "groma," and comes to the conclusion that it is very doubtful if it really is a groma.

account of these, together with a useful bibliography of the subject, will be found in *Discovery* (Vol. VI, September, 1925, p. 340).

The portion now brought to notice consists of two roughly shaped pieces (each about 12 inches in length, formed of the centre rib of a date-palm leaf) bound together at the centres with a rope of date-palm fibre, forming a convenient loop for suspension. Near the ends of each piece are vertical in-cuts to locate the plummet strings. (Fig. 3.)

So far as is known, this is the first specimen of the kind which has been brought to light. It was unearthed in the neighbourhood of the Fayum in 1899 and until a few weeks ago lay unrecognised amongst a number of miscellaneous objects. It probably dates from the Graeco-Roman period and may be a tomb model.

The specimen has been acquired by the South Kensington Museum Authorities and will shortly be exhibited there. I am indebted to Col. Sir Henry G. Lyons, F.R.S., for the accompanying photograph and to the Council of the Newcomen Society for permission to reproduce Figs. 1 and 2.





R. W. SLOLEY.

SOME SCARABS FROM THE SOUTH OF RUSSIA.

To the few scarabs and scaraboids found at the northern coast of the Black Sea, and published by the late Prof. B. Touraieff (*Rev. Arch.*, XVIII, pp. 20 ff.), some more should be added, as all these scarabs are of some interest both to Egyptian and classical archaeologists, having most striking analogies with the scarabs found at Naucratis, and published by W. M. Flinders Petrie and E. Gardner (*Naucratis*, I, Pls. XXXVII-XXXVIII; II, Pl. XVIII).

The group of scarabs that I am going to deal with consists of 17 specimens. Five of them (Figs. 1-5) come from Olbia from the excavations of Prof. B. Pharmakovsky during the year 1911; five (Figs. 12-16) from the year 1902, two (Figs. 17-18) from the year 1914, one from the year 1908 (Fig. 19) and four from the collection of the late Prof. Touraieff (Figs. 8-11). They are all made of a very soft paste which turns easily to powder. This paste is light-blue or light-yellow, and is usually coloured all through. The form of the scarabs is very simple; the elytra are outlined, and a line also divides the elytra from the thorax; the head, clypeus and eyes, as well as legs, are roughly marked. All the scarabs are pierced longitudinally with a hole.

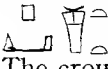

Five scarabs found at Olbia in 1911 in one tomb (Figs. 1-5) are alike in their form, material and dimensions. They are all about 0.4 inch long, and all are made of light-blue paste. On their bases they bear the following inscriptions and figures:—

1. A lion and a solar disc (*Naucratis*, I, Pl. XXXVII, 34-41; II, Pl. XVIII, 8).
2.  (*ibid.*, I, Pl. XXXVII, 47-50).
3.  (*ibid.*, Pl. XXXVII, 93-97).
4.  (*ibid.*, Pl. XXXVII, 84).
5. 

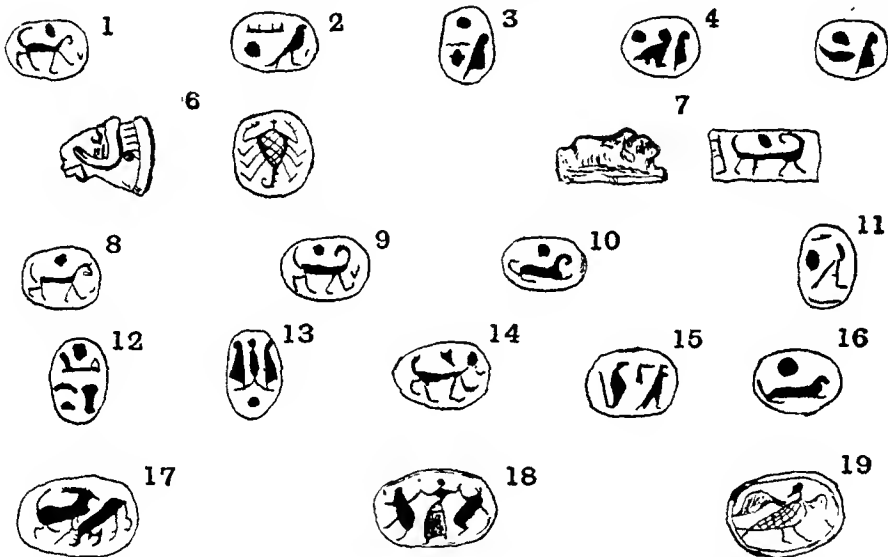
The last of these scarabs has no complete analogy among the Naucratic scarabs, but as it was found in the same tomb as the four others, and is identical with them in form and colour, there can be no doubt that it comes from the same place. In the same tomb with these scarabs three pendants were found; two are made of glass and represent lions lying on a rectangular base with paws stretched out before them (Fig. 7), and the third pendant is of blue Egyptian porcelain, representing a ram's head (Fig. 6). The pendants in form of lions were found at Naucratis (*Naucratis*, I, Pl. XXXVII, 50, 64, 69, 80, 92, 99, 104) as well as a mould for modelling them (*ibid.*, I, Pl. XXXVIII, 6). On the base of one of the lions is a figure of a lion, intaglio, with his head turned back and a solar disc over him. The other lion is unfortunately mutilated, so that the inscription is unreadable. As to the pendant in form of a ram's head, we find at Naucratis several similar pendants, so much like ours that they seem to be made out of the same mould (*ibid.*, I, Pl. XXXVII, 135, 136, 143, 144; II, Pl. XVIII, 54-56). On the base our pendant has a figure of a scorpion (*ibid.*, I, Pl. XXXVII, 8-10).

Turning to the remaining scarabs, we see that two scarabs from the collection of Prof. Touraieff (Figs. 8–9) bear also the figures of a lion and a solar disc, and consequently are identical with the above-described scarab (Fig. 1). The third scarab from that collection has the same figure of a lion, only lying, and a disc over him (Fig. 10). The last of Prof. Touraieff's scarabs (Fig. 11) has a resemblance to *Naucratis*, II, Pl. XVIII, 20.

The five scarabs from the excavations of Prof. Pharmakovsky of the year 1902 were also found in one tomb. They bear the following inscriptions:—

1.  (Fig. 12) (*Naucratis*, I, Pl. XXXVII, 117, 118; II, Pl. XVIII, 70).
2. The crown sf (Fig. 13) (*ibid.*, I, Pl. XXXVII, 120).
3. Winged sphinx (Fig. 14) (*ibid.*, I, Pl. XXXVII, 28–30; II, Pl. XVIII, 60–62).
4.  (Fig. 15).
5. A lion with a solar disc (Fig. 16) (*ibid.*, I, Pl. XXXVII, 42–43).

All these scarabs are of a soft light-yellow paste, and bear traces of greenish glaze.



The two scarabs, Figs. 17–18, come from the excavations at Olbia of 1914. They are of soft light-yellow paste, and one has traces of light-blue colour, both of them being flat and long, with hairy legs. On the base one of them has figures of two beasts, the same as we have on several specimens from *Naucratis* (I, Pl. XXXVII, 137–140, 145), and on two scaraboids from Olbia and Berezan, published by Touraieff (*Rev. Arch.*, XVIII, p. 21, Figs. 1–2). On the other scarab is represented a human figure holding two animals in her hands (*ibid.*, II, Pl. XVIII, 58).

The scarab, Fig. 19, has a figure of a bird with outstretched wings, which recalls the Naucratic scarab (*Naucratis*, I, Pl. XXXVII, 79), but as the bird is different it may be of some interest as a new specimen of Naucratic scarabs not found at *Naucratis* itself.

In the tombs, together with our scarabs (as can be traced from the diaries of Prof. Pharmakovsky), were found black-figured vases, Rhodian, Miletian and Naucratic ware, porcelain and glass beads, which of course fully correspond with the fact of the Naucratic origin of our scarabs.

THE RELATIONS OF EGYPT TO ISRAEL AND JUDAH IN THE
AGE OF ISAIAH—*continued.*

II.—713 B.C.

AFTER the defeat of the Ethiopians at Raphia, 720 B.C., Egypt played no prominent part in Palestinian affairs in the following years. Philistia, Judah, Edom, Moab are found leagued together in 713 B.C. The centre of disturbance on that occasion appears to have been at Ashdod, where a Greek adventurer had seized the throne. The confederates sent to Pharaoh, king of Egypt, "a prince who could not help them," to invite him to join them. In the records of this year Egypt is apparently regarded as a separate power from Ethiopia. Shabaka had not yet established himself in lower Egypt. Hence we cannot date his rule of that country before the latter part of 713 B.C. at the soonest.

The attempt to secure help from Egypt on this occasion appears to have called forth the oracle we read in Isaiah xxx, 1-5, where the prophet depicts the position of Egypt in terms that were singularly applicable at this juncture.

"1. Ah the rebellious children, saith the Lord, that make a plan, but not of me, and that cover with a covering, but not of my spirit, that they may add sin to sin: 2. that walk to go down into Egypt, and have not asked at my mouth, to strengthen themselves in the strength of Pharaoh, and to trust in the shadow of Egypt.

"3. Therefore shall the strength of Pharaoh be your shame, and the trust in the shadow of Egypt your confusion.

"4. Since his princes were at Zoan and his messengers have reached Hanes, 5. they shall all be ashamed of a people that cannot profit them, that are not an help nor profit, but a shame, and also a reproach."

Such language is certainly not applicable to the year 701 B.C., when the Ethiopians and Egyptians fought at Eltakeh; but it exactly squares with the facts of the earlier year.

"How dangerous this outbreak was considered is shown by the haste with which Sargon acted. Although it was too early for the feudal levy to be called out, he hurried off his turtanu Ashur-isqa-danin with but four hundred and twenty of his own body-guard. The Assyrians suddenly appeared and invested Azekah . . . The Ionian had surrounded low-lying Ashdod with a trench and secured a water-supply from the outside; the capture of Azekah made him lose heart, and he fled to Egypt, whence he was extradited and handed over to Sargon."¹

That was early in 713 B.C., in the fourteenth year of king Hezekiah. In the present form of the books of Kings, the account of Sennacherib's later expedition has been transposed to the place where there may once have been a narrative of this earlier rising against Assyria and attached to the date of Tartan's expedition (2 Kings xviii, 13). But we shall see later that the best Hebrew evidence as to the date of Hezekiah's accession shows that the date given is that of the earlier campaign.

¹ Olmstead, *History of Assyria*, p. 219.

We now come to an oracle (Isaiah xx) which is often treated as relating to the Tartan's expedition. Nothing could be more contrary to its tenour. If it is carefully read, it becomes apparent that in the Tartan's year Isaiah began his symbolical action, and that it was not till he had "walked naked and barefoot three years" that the prediction was uttered. How the three years were calculated we do not know; they may have been something less than three full calendar years. But when all possible deductions are made, the language used cannot indicate an oracle given before the Tartan's coming. The text is as follows:—

"1. In the year that Tartan came to Ashdod, when Sargon the king of Assyria sent him, and he fought against Ashdod and took it; 2. at that time the Lord spake by Isaiah the son of Amoz, saying, Go, and loose the sackcloth from off thy loins, and put thy shoe from off thy foot.

"And he did so, walking naked and barefoot.

"3. And the Lord said, Like as my servant Isaiah hath walked naked and barefoot three years for a sign and a wonder upon Egypt and upon Ethiopia; 4. so shall the king of Assyria lead away the captives of Egypt, and the exiles of Ethiopia, young and old, naked and barefoot, and with buttocks uncovered, to the shame of Egypt. 5. And they shall be dismayed and ashamed, because of Ethiopia their expectation, and of Egypt their glory. 6. And the inhabitant of this coastland shall say in that day, Behold, such is our expectation, whither we fled for help to be delivered from the king of Assyria; and we, how shall we escape?"¹

That is a clear prediction of the battle of Eltakeh in which Sennacherib defeated the forces of Ethiopia and Egypt with results that were fatal to the rebellion of the small Syrian states of the coastland. Many oracles of Isaiah as to this have been preserved. It lies outside the scope of this article to discuss them, or indeed the battle and the events leading up to it as a whole.²

But there is one point on which Isaiah appears to provide evidence that has a bearing on Egyptian history. While most writers hold that the whole account of the Assyrian invasion in the books of Kings relates to the events of 701 B.C., the suggestion has been made that there was a later Assyrian expedition, of which the monuments make no mention, about 690 B.C. Were the chronology of the books of Kings above all suspicion, it would settle the matter by fixing the dates of Hezekiah's reign, and (approximately) of Isaiah's ministry; but it happens that its data are not self-consistent, and various opinions are held as to the sources of error. It is a fortunate circumstance that we possess a piece of contemporary Hebrew evidence which sets the question at rest.

By dead reckoning from the fall of Jerusalem in 587 B.C. we obtain the year 727 B.C. as the date of Hezekiah's accession according to the books of Kings. The writer who is responsible for that chronology obviously cannot have lived before the last event narrated in the books, *i.e.* before the exile, so that his testimony is not equal to that of a contemporary. But we have a prophecy of Isaiah's

¹ Olmstead writes of 713 B.C., "Judah was by no means a unit in entering the new combination, for Isaiah protested strongly. He loosed the sackcloth from his loins and the sandals from his feet and delivered this oracle" (*op. cit.*, p. 218 f). How an oracle delivered some years after the Tartan's expedition could be a protest against the events leading up to it is left unexplained.

² On these see Wiener, *The Prophets of Israel*, Chapter III.

dated in the year that Hezekiah's predecessor, Ahaz, died. This is couched in language which shows that Tiglath-Pileser had recently passed away, and so fixes the year 727 B.C., the year of his death, as the date of Hezekiah's accession. The errors of Kings must be sought in the attaching of the account of Sennacherib's expedition to the date of the Tartan's and in the statements as to Ahaz.

The oracle (Isaiah xiv, 28-32) runs as follows:—

"28. In the year that King Ahaz died was this burden:—

"29. Rejoice not, O Philistia, all of thee, because the rod that smote thee [*i.e.* Tiglath-Pileser] is broken; for out of the serpent's root [*i.e.* Assyria] shall come forth a basilisk [*i.e.* Sargon], and his fruit [*i.e.* his son, Sennacherib] shall be a fiery flying serpent.

"30. But the firstborn of the poor [*i.e.* the believing Jews] shall feed, and the needy [*i.e.* the same] shall lie down in safety [*i.e.* Jerusalem will not fall].

"but I will kill thy root [*i.e.* Philistines] with famine, and thy remnant [*i.e.* the same] shall be slain.

"31. Howl, O gate; cry, O city; thou art melted away, O Philistia, all of thee [*i.e.* the Philistines will be utterly subdued]; for there cometh a smoke out of the north [*i.e.* an Assyrian army will come], and none standeth aloof at his appointed times [*i.e.* with a full complement properly equipped and organised].

"32. What then shall one answer the messengers of the nation [*i.e.* What reply should be given to the Philistine embassy]?

"That the Lord hath founded Zion, and in her shall the afflicted of his people take refuge [*i.e.* that Zion will remain the inviolate refuge of the Jews in the Assyrian invasions]."¹

How extraordinarily accurate this is will be seen when the historical facts are recalled. Tiglath-Pileser dealt harshly with Philistia. His immediate successor, Shalmaneser, is not known to have fought against them. Isaiah's oracle foretells not that a fresh enemy *has* come forth out of the serpent's root, but that he *will* do so. This came about with the accession of Sargon, who was not related to his predecessors. He [the basilisk] and Sennacherib [his fruit], however, were father and son, and both inflicted terrible chastisement on the Philistines.

In view of all this, the date of Hezekiah's accession is clearly 727 B.C.² He reigned for 29 years. His prophet, Isaiah, had begun his ministry in the year that king Uzziah died (Isaiah vi, 1), and is said to have had his visions in the days of Uzziah, Jotham, Ahaz and Hezekiah. Neither king nor prophet would have been available for the rôles assigned to them in 690 B.C., the date postulated by the theory of a second expedition of Sennacherib.

HAROLD WIENER.

¹ Olmstead, *op. cit.* (p. 297), apparently refers this oracle to the year 701 B.C. He has not noticed that it was delivered in the year that King Ahaz died, an event he puts twenty years earlier, in 721 B.C. (p. 212). The same writer refers the Emmanuel prophecy to Hezekiah (*ibid.* and p. 197 f.), seemingly overlooking the fact that the latter is said to have been 25 years old on his accession (2 Kings xviii, 2). Dr. S. A. Cook (*Cambridge Ancient History*, III, p. 388) attributes this oracle to the death of Shalmaneser in 722 B.C. This view is ruled out by the fact that the Philistines were rejoicing at the breaking of the rod that smote them; and Shalmaneser did not attack them.

² For a detailed discussion of the difficulties of the chronology of Kings which falls outside the scope of this article, see Wiener, *op. cit.*, Appendix I.

PROFESSIONS AND TRADES.

Astronomy, etc.	1551-1556	Jewellers	1663-1680
Hunting and fishing	1557-1567	Smiths	1681-1695
Inspectors	1568-1574	Carpenters	1696-1710
Artizans	1575-1584	Bakers	1711-1726
Art	1585-1595	Weaving, etc.	1727-1740
Workmen	1596-1605	Domestic	1741-1745
Sculptors	1606-1617	Nurses	1746-1751
Fitters	1618-1636	Customs	1754-1760
Masons	1637-1643	Deserts	1761-1782
Miners	1644-1662	Foreigners	1783-1804

THE recording of time had a special office and service—the keeper of the office of *urshu* (1551-2). It may be that this refers to the “great one,” or manager, of the “basin of water,” the dripping of which measured the time. The basinful would thus naturally come to mean “the whole day.” That there was a time measure is shown by the “office of the day and the hours” (1553).

1551 𐎓𐎔𐎕𐎗𐎙𐎛𐎟𐎠𐎡𐎢𐎣𐎤𐎥𐎦𐎧𐎨𐎩𐎪𐎫𐎬𐎭𐎮𐎯𐎰𐎱𐎲𐎳𐎴𐎵𐎶𐎷𐎸𐎹𐎺𐎻𐎼𐎽𐎾𐎿𐏀𐏁𐏂𐏃𐏄𐏅𐏆𐏇𐏈𐏉𐏊𐏋𐏌𐏍𐏎𐏏𐏐𐏑𐏒𐏓𐏔𐏕𐏖𐏗𐏘𐏙𐏚𐏛𐏜𐏝𐏞𐏟𐏠𐏡𐏢𐏣𐏤𐏥𐏦𐏧𐏨𐏩𐏪𐏫𐏬𐏭𐏮𐏯𐏰𐏱𐏲𐏳𐏴𐏵𐏶𐏷𐏸𐏹𐏺𐏻𐏼𐏽𐏾𐏿𐐀𐐁𐐂𐐃𐐄𐐅𐐆𐐇𐐈𐐉𐐊𐐋𐐌𐐍𐐎𐐏𐐐𐐑𐐒𐐓𐐔𐐕𐐖𐐗𐐘𐐙𐐚𐐛𐐜𐐝𐐞𐐟𐐠𐐡𐐢𐐣𐐤𐐥𐐦𐐧𐐨𐐩𐐪𐐫𐐬𐐭𐐮𐐯𐐰𐐱𐐲𐐳𐐴𐐵𐐶𐐷𐐸𐐹𐐺𐐻𐐼𐐽𐐾𐐿𐑀𐑁𐑂𐑃𐑄𐑅𐑆𐑇𐑈𐑉𐑊𐑋𐑌𐑍𐑎𐑏𐑐𐑑𐑒𐑓𐑔𐑕𐑖𐑗𐑘𐑙𐑚𐑛𐑜𐑝𐑞𐑟𐑠𐑡𐑢𐑣𐑤𐑥𐑦𐑧𐑨𐑩𐑪𐑫𐑬𐑭𐑮𐑯𐑰𐑱𐑲𐑳𐑴𐑵𐑶𐑷𐑸𐑹𐑺𐑻𐑼𐑽𐑾𐑿𐒀𐒁𐒂𐒃𐒄𐒅𐒆𐒇𐒈𐒉𐒊𐒋𐒌𐒍𐒎𐒏𐒐𐒑𐒒𐒓𐒔𐒕𐒖𐒗𐒘𐒙𐒚𐒛𐒜𐒝𐒞𐒟𐒠𐒡𐒢𐒣𐒤𐒥𐒦𐒧𐒨𐒩𐒪𐒫𐒬𐒭𐒮𐒯𐒰𐒱𐒲𐒳𐒴𐒵𐒶𐒷𐒸𐒹𐒺𐒻𐒼𐒽𐒾𐒿𐓀𐓁𐓂𐓃𐓄𐓅𐓆𐓇𐓈𐓉𐓊𐓋𐓌𐓍𐓎𐓏𐓐𐓑𐓒𐓓𐓔𐓕𐓖𐓗𐓘𐓙𐓚𐓛𐓜𐓝𐓞𐓟𐓠𐓡𐓢𐓣𐓤𐓥𐓦𐓧𐓨𐓩𐓪𐓫𐓬𐓭𐓮𐓯𐓰𐓱𐓲𐓳𐓴𐓵𐓶𐓷𐓸𐓹𐓺𐓻𐓼𐓽𐓾𐓿𐔀𐔁𐔂𐔃𐔄𐔅𐔆𐔇𐔈𐔉𐔊𐔋𐔌𐔍𐔎𐔏𐔐𐔑𐔒𐔓𐔔𐔕𐔖𐔗𐔘𐔙𐔚𐔛𐔜𐔝𐔞𐔟𐔠𐔡𐔢𐔣𐔤𐔥𐔦𐔧𐔨𐔩𐔪𐔫𐔬𐔭𐔮𐔯𐔰𐔱𐔲𐔳𐔴𐔵𐔶𐔷𐔸𐔹𐔺𐔻𐔼𐔽𐔾𐔿𐕀𐕁𐕂𐕃𐕄𐕅𐕆𐕇𐕈𐕉𐕊𐕋𐕌𐕍𐕎𐕏𐕐𐕑𐕒𐕓𐕔𐕕𐕖𐕗𐕘𐕙𐕚𐕛𐕜𐕝𐕞𐕟𐕠𐕡𐕢𐕣𐕤𐕥𐕦𐕧𐕨𐕩𐕪𐕫𐕬𐕭𐕮𐕯𐕰𐕱𐕲𐕳𐕴𐕵𐕶𐕷𐕸𐕹𐕺𐕻𐕼𐕽𐕾𐕿𐖀𐖁𐖂𐖃𐖄𐖅𐖆𐖇𐖈𐖉𐖊𐖋𐖌𐖍𐖎𐖏𐖐𐖑𐖒𐖓𐖔𐖕𐖖𐖗𐖘𐖙𐖚𐖛𐖜𐖝𐖞𐖟𐖠𐖡𐖢𐖣𐖤𐖥𐖦𐖧𐖨𐖩𐖪𐖫𐖬𐖭𐖮𐖯𐖰𐖱𐖲𐖳𐖴𐖵𐖶𐖷𐖸𐖹𐖺𐖻𐖼𐖽𐖾𐖿𐗀𐗁𐗂𐗃𐗄𐗅𐗆𐗇𐗈𐗉𐗊𐗋𐗌𐗍𐗎𐗏𐗐𐗑𐗒𐗓𐗔𐗕𐗖𐗗𐗘𐗙𐗚𐗛𐗜𐗝𐗞𐗟𐗠𐗡𐗢𐗣𐗤𐗥𐗦𐗧𐗨𐗩𐗪𐗫𐗬𐗭𐗮𐗯𐗰𐗱𐗲𐗳𐗴𐗵𐗶𐗷𐗸𐗹𐗺𐗻𐗼𐗽𐗾𐗿𐘀𐘁𐘂𐘃𐘄𐘅𐘆𐘇𐘈𐘉𐘊𐘋𐘌𐘍𐘎𐘏𐘐𐘑𐘒𐘓𐘔𐘕𐘖𐘗𐘘𐘙𐘚𐘛𐘜𐘝𐘞𐘟𐘠𐘡𐘢𐘣𐘤𐘥𐘦𐘧𐘨𐘩𐘪𐘫𐘬𐘭𐘮𐘯𐘰𐘱𐘲𐘳𐘴𐘵𐘶𐘷𐘸𐘹𐘺𐘻𐘼𐘽𐘾𐘿𐙀𐙁𐙂𐙃𐙄𐙅𐙆𐙇𐙈𐙉𐙊𐙋𐙌𐙍𐙎𐙏𐙐𐙑𐙒𐙓𐙔𐙕𐙖𐙗𐙘𐙙𐙚𐙛𐙜𐙝𐙞𐙟𐙠𐙡𐙢𐙣𐙤𐙥𐙦𐙧𐙨𐙩𐙪𐙫𐙬𐙭𐙮𐙯𐙰𐙱𐙲𐙳𐙴𐙵𐙶𐙷𐙸𐙹𐙺𐙻𐙼𐙽𐙾𐙿𐚀𐚁𐚂𐚃𐚄𐚅𐚆𐚇𐚈𐚉𐚊𐚋𐚌𐚍𐚎𐚏𐚐𐚑𐚒𐚓𐚔𐚕𐚖𐚗𐚘𐚙𐚚𐚛𐚜𐚝𐚞𐚟𐚠𐚡𐚢𐚣𐚤𐚥𐚦𐚧𐚨𐚩𐚪𐚫𐚬𐚭𐚮𐚯𐚰𐚱𐚲𐚳𐚴𐚵𐚶𐚷𐚸𐚹𐚺𐚻𐚼𐚽𐚾𐚿𐛀𐛁𐛂𐛃𐛄𐛅𐛆𐛇𐛈𐛉𐛊𐛋𐛌𐛍𐛎𐛏𐛐𐛑𐛒𐛓𐛔𐛕𐛖𐛗𐛘𐛙𐛚𐛛𐛜𐛝𐛞𐛟𐛠𐛡𐛢𐛣𐛤𐛥𐛦𐛧𐛨𐛩𐛪𐛫𐛬𐛭𐛮𐛯𐛰𐛱𐛲𐛳𐛴𐛵𐛶𐛷𐛸𐛹𐛺𐛻𐛼𐛽𐛾𐛿𐜀𐜁𐜂𐜃𐜄𐜅𐜆𐜇𐜈𐜉𐜊𐜋𐜌𐜍𐜎𐜏𐜐𐜑𐜒𐜓𐜔𐜕𐜖𐜗𐜘𐜙𐜚𐜛𐜜𐜝𐜞𐜟𐜠𐜡𐜢𐜣𐜤𐜥𐜦𐜧𐜨𐜩𐜪𐜫𐜬𐜭𐜮𐜯𐜰𐜱𐜲𐜳𐜴𐜵𐜶𐜷𐜸𐜹𐜺𐜻𐜼𐜽𐜾𐜿𐝀𐝁𐝂𐝃𐝄𐝅𐝆𐝇𐝈𐝉𐝊𐝋𐝌𐝍𐝎𐝏𐝐𐝑𐝒𐝓𐝔𐝕𐝖𐝗𐝘𐝙𐝚𐝛𐝜𐝝𐝞𐝟𐝠𐝡𐝢𐝣𐝤𐝥𐝦𐝧𐝨𐝩𐝪𐝫𐝬𐝭𐝮𐝯𐝰𐝱𐝲𐝳𐝴𐝵𐝶𐝷𐝸𐝹𐝺𐝻𐝼𐝽𐝾𐝿𐞀𐞁𐞂𐞃𐞄𐞅𐞆𐞇𐞈𐞉𐞊𐞋𐞌𐞍𐞎𐞏𐞐𐞑𐞒𐞓𐞔𐞕𐞖𐞗𐞘𐞙𐞚𐞛𐞜𐞝𐞞𐞟𐞠𐞡𐞢𐞣𐞤𐞥𐞦𐞧𐞨𐞩𐞪𐞫𐞬𐞭𐞮𐞯𐞰𐞱𐞲𐞳𐞴𐞵𐞶𐞷𐞸𐞹𐞺𐞻𐞼𐞽𐞾𐞿𐟀𐟁𐟂𐟃𐟄𐟅𐟆𐟇𐟈𐟉𐟊𐟋𐟌𐟍𐟎𐟏𐟐𐟑𐟒𐟓𐟔𐟕𐟖𐟗𐟘𐟙𐟚𐟛𐟜𐟝𐟞𐟟𐟠𐟡𐟢𐟣𐟤𐟥𐟦𐟧𐟨𐟩𐟪𐟫𐟬𐟭𐟮𐟯𐟰𐟱𐟲𐟳𐟴𐟵𐟶𐟷𐟸𐟹𐟺𐟻𐟼𐟽𐟾𐟿𐠀𐠁𐠂𐠃𐠄𐠅𐠆𐠇𐠈𐠉𐠊𐠋𐠌𐠍𐠎𐠏𐠐𐠑𐠒𐠓𐠔𐠕𐠖𐠗𐠘𐠙𐠚𐠛𐠜𐠝𐠞𐠟𐠠𐠡𐠢𐠣𐠤𐠥𐠦𐠧𐠨𐠩𐠪𐠫𐠬𐠭𐠮𐠯𐠰𐠱𐠲𐠳𐠴𐠵𐠶𐠷𐠸𐠹𐠺𐠻𐠼𐠽𐠾𐠿𐡀𐡁𐡂𐡃𐡄𐡅𐡆𐡇𐡈𐡉𐡊𐡋𐡌𐡍𐡎𐡏𐡐𐡑𐡒𐡓𐡔𐡕𐡖𐡗𐡘𐡙𐡚𐡛𐡜𐡝𐡞𐡟𐡠𐡡𐡢𐡣𐡤𐡥𐡦𐡧𐡨𐡩𐡪𐡫𐡬𐡭𐡮𐡯𐡰𐡱𐡲𐡳𐡴𐡵𐡶𐡷𐡸𐡹𐡺𐡻𐡼𐡽𐡾𐡿𐢀𐢁𐢂𐢃𐢄𐢅𐢆𐢇𐢈𐢉𐢊𐢋𐢌𐢍𐢎𐢏𐢐𐢑𐢒𐢓𐢔𐢕𐢖𐢗𐢘𐢙𐢚𐢛𐢜𐢝𐢞𐢟𐢠𐢡𐢢𐢣𐢤𐢥𐢦𐢧𐢨𐢩𐢪𐢫𐢬𐢭𐢮𐢯𐢰𐢱𐢲𐢳𐢴𐢵𐢶𐢷𐢸𐢹𐢺𐢻𐢼𐢽𐢾𐢿𐣀𐣁𐣂𐣃𐣄𐣅𐣆𐣇𐣈𐣉𐣊𐣋𐣌𐣍𐣎𐣏𐣐𐣑𐣒𐣓𐣔𐣕𐣖𐣗𐣘𐣙𐣚𐣛𐣜𐣝𐣞𐣟𐣠𐣡𐣢𐣣𐣤𐣥𐣦𐣧𐣨𐣩𐣪𐣫𐣬𐣭𐣮𐣯𐣰𐣱𐣲𐣳𐣴𐣵𐣶𐣷𐣸𐣹𐣺𐣻𐣼𐣽𐣾𐣿𐤀𐤁𐤂𐤃𐤄𐤅𐤆𐤇𐤈𐤉𐤊𐤋𐤌𐤍𐤎𐤏𐤐𐤑𐤒𐤓𐤔𐤕𐤖𐤗𐤘𐤙𐤚𐤛𐤜𐤝𐤞𐤟𐤠𐤡𐤢𐤣𐤤𐤥𐤦𐤧𐤨𐤩𐤪𐤫𐤬𐤭𐤮𐤯𐤰𐤱𐤲𐤳𐤴𐤵𐤶𐤷𐤸𐤹𐤺𐤻𐤼𐤽𐤾𐤿𐥀𐥁𐥂𐥃𐥄𐥅𐥆𐥇𐥈𐥉𐥊𐥋𐥌𐥍𐥎𐥏𐥐𐥑𐥒𐥓𐥔𐥕𐥖𐥗𐥘𐥙𐥚𐥛𐥜𐥝𐥞𐥟𐥠𐥡𐥢𐥣𐥤𐥥𐥦𐥧𐥨𐥩𐥪𐥫𐥬𐥭𐥮𐥯𐥰𐥱𐥲𐥳𐥴𐥵𐥶𐥷𐥸𐥹𐥺𐥻𐥼𐥽𐥾𐥿𐦀𐦁𐦂𐦃𐦄𐦅𐦆𐦇𐦈𐦉𐦊𐦋𐦌𐦍𐦎𐦏𐦐𐦑𐦒𐦓𐦔𐦕𐦖𐦗𐦘𐦙𐦚𐦛𐦜𐦝𐦞𐦟𐦠𐦡𐦢𐦣𐦤𐦥𐦦𐦧𐦨𐦩𐦪𐦫𐦬𐦭𐦮𐦯𐦰𐦱𐦲𐦳𐦴𐦵𐦶𐦷𐦸𐦹𐦺𐦻𐦼𐦽𐦾𐦿𐧀𐧁𐧂𐧃𐧄𐧅𐧆𐧇𐧈𐧉𐧊𐧋𐧌𐧍𐧎𐧏𐧐𐧑𐧒𐧓𐧔𐧕𐧖𐧗𐧘𐧙𐧚𐧛𐧜𐧝𐧞𐧟𐧠𐧡𐧢𐧣𐧤𐧥𐧦𐧧𐧨𐧩𐧪𐧫𐧬𐧭𐧮𐧯𐧰𐧱𐧲𐧳𐧴𐧵𐧶𐧷𐧸𐧹𐧺𐧻𐧼𐧽𐧾𐧿𐨀𐨁𐨂𐨃𐨄𐨅𐨆𐨇𐨈𐨉𐨊𐨋𐨌𐨍𐨎𐨏𐨐𐨑𐨒𐨓𐨔𐨕𐨖𐨗𐨘𐨙𐨚𐨛𐨜𐨝𐨞𐨟𐨠𐨡𐨢𐨣𐨤𐨥𐨦𐨧𐨨𐨩𐨪𐨫𐨬𐨭𐨮𐨯𐨰𐨱𐨲𐨳𐨴𐨵𐨶𐨷𐨹𐨺𐨸𐨻𐨼𐨽𐨾𐨿𐩀𐩁𐩂𐩃𐩄𐩅𐩆𐩇𐩈𐩉𐩊𐩋𐩌𐩍𐩎𐩏𐩐𐩑𐩒𐩓𐩔𐩕𐩖𐩗𐩘𐩙𐩚𐩛𐩜𐩝𐩞𐩟𐩠𐩡𐩢𐩣𐩤𐩥𐩦𐩧𐩨𐩩𐩪𐩫𐩬𐩭𐩮𐩯𐩰𐩱𐩲𐩳𐩴𐩵𐩶𐩷𐩸𐩹𐩺𐩻𐩼𐩽𐩾𐩿𐪀𐪁𐪂𐪃𐪄𐪅𐪆𐪇𐪈𐪉𐪊𐪋𐪌𐪍𐪎𐪏𐪐𐪑𐪒𐪓𐪔𐪕𐪖𐪗𐪘𐪙𐪚𐪛𐪜𐪝𐪞𐪟𐪠𐪡𐪢𐪣𐪤𐪥𐪦𐪧𐪨𐪩𐪪𐪫𐪬𐪭𐪮𐪯𐪰𐪱𐪲𐪳𐪴𐪵𐪶𐪷𐪸𐪹𐪺𐪻𐪼𐪽𐪾𐪿𐫀𐫁𐫂𐫃𐫄𐫅𐫆𐫇𐫈𐫉𐫊𐫋𐫌𐫍𐫎𐫏𐫐𐫑𐫒𐫓𐫔𐫕𐫖𐫗𐫘𐫙𐫚𐫛𐫜𐫝𐫞𐫟𐫠𐫡𐫢𐫣𐫤𐫦𐫥𐫧𐫨𐫩𐫪𐫫𐫬𐫭𐫮𐫯𐫰𐫱𐫲𐫳𐫴𐫵𐫶𐫷𐫸𐫹𐫺𐫻𐫼𐫽𐫾𐫿𐬀𐬁𐬂𐬃𐬄𐬅𐬆𐬇𐬈𐬉𐬊𐬋𐬌𐬍𐬎𐬏𐬐𐬑𐬒𐬓𐬔𐬕𐬖𐬗𐬘𐬙𐬚𐬛𐬜𐬝𐬞𐬟𐬠𐬡𐬢𐬣𐬤𐬥𐬦𐬧𐬨𐬩𐬪𐬫𐬬𐬭𐬮𐬯𐬰𐬱𐬲𐬳𐬴𐬵𐬶𐬷𐬸𐬹𐬺𐬻𐬼𐬽𐬾𐬿𐭀𐭁𐭂𐭃𐭄𐭅𐭆𐭇𐭈𐭉𐭊𐭋𐭌𐭍𐭎𐭏𐭐𐭑𐭒𐭓𐭔𐭕𐭖𐭗𐭘𐭙𐭚𐭛𐭜𐭝𐭞𐭟𐭠𐭡𐭢𐭣𐭤𐭥𐭦𐭧𐭨𐭩𐭪𐭫𐭬𐭭𐭮𐭯𐭰𐭱𐭲𐭳𐭴𐭵𐭶𐭷𐭸𐭹𐭺𐭻𐭼𐭽𐭾𐭿𐮀𐮁𐮂𐮃𐮄𐮅𐮆𐮇𐮈𐮉𐮊𐮋𐮌𐮍𐮎𐮏𐮐𐮑𐮒𐮓𐮔𐮕𐮖𐮗𐮘𐮙𐮚𐮛𐮜𐮝𐮞𐮟𐮠𐮡𐮢𐮣𐮤𐮥𐮦𐮧𐮨𐮩𐮪𐮫𐮬𐮭𐮮𐮯𐮰𐮱𐮲𐮳𐮴𐮵𐮶𐮷𐮸𐮹𐮺𐮻𐮼𐮽𐮾𐮿𐯀𐯁𐯂𐯃𐯄𐯅𐯆𐯇𐯈𐯉𐯊𐯋𐯌𐯍𐯎𐯏𐯐𐯑𐯒𐯓𐯔𐯕𐯖𐯗𐯘𐯙𐯚𐯛𐯜𐯝𐯞𐯟𐯠𐯡𐯢𐯣𐯤𐯥𐯦𐯧𐯨𐯩𐯪𐯫𐯬𐯭𐯮𐯯𐯰𐯱𐯲𐯳𐯴𐯵𐯶𐯷𐯸𐯹𐯺𐯻𐯼𐯽𐯾𐯿𐰀𐰁𐰂𐰃𐰄𐰅𐰆𐰇𐰈𐰉𐰊𐰋𐰌𐰍𐰎𐰏𐰐𐰑𐰒𐰓𐰔𐰕𐰖𐰗𐰘𐰙𐰚𐰛𐰜𐰝𐰞𐰟𐰠𐰡𐰢𐰣𐰤𐰥𐰦𐰧𐰨𐰩𐰪𐰫𐰬𐰭𐰮𐰯𐰰𐰱𐰲𐰳𐰴𐰵𐰶𐰷𐰸𐰹𐰺𐰻𐰼𐰽𐰾𐰿𐱀𐱁𐱂𐱃𐱄𐱅𐱆𐱇𐱈𐱉𐱊𐱋𐱌𐱍𐱎𐱏𐱐𐱑𐱒𐱓𐱔𐱕𐱖𐱗𐱘𐱙𐱚𐱛𐱜𐱝𐱞𐱟𐱠𐱡𐱢𐱣𐱤𐱥𐱦𐱧𐱨𐱩𐱪𐱫𐱬𐱭𐱮𐱯𐱰𐱱𐱲𐱳𐱴𐱵𐱶𐱷𐱸𐱹𐱺𐱻𐱼𐱽𐱾𐱿𐲀𐲁𐲂𐲃𐲄𐲅𐲆𐲇𐲈𐲉𐲊𐲋𐲌𐲍𐲎𐲏𐲐𐲑𐲒𐲓𐲔𐲕𐲖𐲗𐲘𐲙𐲚𐲛𐲜𐲝𐲞𐲟𐲠𐲡𐲢𐲣𐲤𐲥𐲦𐲧𐲨𐲩𐲪𐲫𐲬𐲭𐲮𐲯𐲰𐲱𐲲𐲳𐲴𐲵𐲶𐲷𐲸𐲹𐲺𐲻𐲼𐲽𐲾𐲿𐳀𐳁𐳂𐳃𐳄𐳅𐳆𐳇𐳈𐳉𐳊𐳋𐳌𐳍𐳎𐳏𐳐𐳑𐳒𐳓𐳔𐳕𐳖𐳗𐳘𐳙𐳚𐳛𐳜𐳝𐳞𐳟𐳠𐳡𐳢𐳣𐳤𐳥𐳦𐳧𐳨𐳩𐳪𐳫𐳬𐳭𐳮𐳯𐳰𐳱𐳲𐳳𐳴𐳵𐳶𐳷𐳸𐳹𐳺𐳻𐳼𐳽𐳾𐳿𐴀𐴁𐴂𐴃𐴄𐴅𐴆𐴇𐴈𐴉𐴊𐴋𐴌𐴍𐴎𐴏𐴐𐴑𐴒𐴓𐴔𐴕𐴖𐴗𐴘𐴙𐴚𐴛𐴜𐴝𐴞𐴟𐴠𐴡𐴢𐴣𐴤𐴥𐴦𐴧𐴨𐴩𐴪𐴫𐴬𐴭𐴮𐴯𐴰𐴱𐴲𐴳𐴴𐴵𐴶𐴷𐴸𐴹𐴺𐴻𐴼𐴽𐴾𐴿𐵀𐵁𐵂𐵃𐵄𐵅𐵆𐵇𐵈𐵉𐵊𐵋𐵌𐵍𐵎𐵏𐵐𐵑𐵒𐵓𐵔𐵕𐵖𐵗𐵘𐵙𐵚𐵛𐵜𐵝𐵞𐵟𐵠𐵡𐵢𐵣𐵤𐵥𐵦𐵧𐵨𐵩𐵪𐵫𐵬𐵭𐵮𐵯𐵰𐵱𐵲𐵳𐵴𐵵𐵶𐵷𐵸𐵹𐵺𐵻𐵼𐵽𐵾𐵿𐶀𐶁𐶂𐶃𐶄𐶅𐶆𐶇𐶈𐶉𐶊𐶋𐶌𐶍𐶎𐶏𐶐𐶑𐶒𐶓𐶔𐶕𐶖𐶗𐶘𐶙𐶚𐶛𐶜𐶝𐶞𐶟𐶠𐶡𐶢𐶣𐶤𐶥𐶦𐶧𐶨𐶩𐶪𐶫𐶬𐶭𐶮𐶯𐶰𐶱𐶲𐶳𐶴𐶵𐶶𐶷𐶸𐶹𐶺𐶻𐶼𐶽𐶾𐶿𐷀𐷁𐷂𐷃𐷄𐷅𐷆𐷇𐷈𐷉𐷊𐷋𐷌𐷍𐷎𐷏𐷐𐷑𐷒𐷓𐷔𐷕𐷖𐷗𐷘𐷙𐷚𐷛𐷜𐷝𐷞𐷟𐷠𐷡𐷢𐷣𐷤𐷥𐷦𐷧𐷨𐷩𐷪𐷫𐷬𐷭𐷮𐷯𐷰𐷱𐷲𐷳𐷴𐷵𐷶𐷷𐷸𐷹𐷺𐷻𐷼𐷽𐷾𐷿𐸀𐸁𐸂𐸃𐸄𐸅𐸆𐸇𐸈𐸉𐸊𐸋𐸌𐸍𐸎𐸏𐸐𐸑𐸒𐸓𐸔𐸕𐸖𐸗𐸘𐸙𐸚𐸛𐸜𐸝𐸞𐸟𐸠𐸡𐸢𐸣𐸤𐸥𐸦𐸧𐸨𐸩𐸪𐸫𐸬𐸭𐸮𐸯𐸰𐸱𐸲𐸳𐸴𐸵𐸶𐸷𐸸𐸹𐸺𐸻𐸼𐸽𐸾𐸿𐹀𐹁𐹂𐹃𐹄𐹅𐹆𐹇𐹈𐹉𐹊𐹋𐹌𐹍𐹎𐹏𐹐𐹑𐹒𐹓𐹔𐹕𐹖𐹗𐹘𐹙𐹚𐹛𐹜𐹝𐹞𐹟𐹠𐹡𐹢𐹣𐹤𐹥𐹦𐹧𐹨𐹩𐹪𐹫𐹬𐹭𐹮𐹯𐹰𐹱𐹲𐹳𐹴𐹵𐹶𐹷𐹸𐹹𐹺𐹻𐹼𐹽𐹾𐹿𐺀𐺁𐺂𐺃𐺄𐺅𐺆𐺇𐺈𐺉𐺊𐺋𐺌𐺍𐺎𐺏𐺐𐺑𐺒𐺓𐺔𐺕𐺖𐺗𐺘𐺙𐺚𐺛𐺜𐺝𐺞𐺟𐺠𐺡𐺢𐺣𐺤𐺥𐺦𐺧𐺨𐺩𐺪𐺫𐺬𐺭𐺮𐺯𐺰𐺱𐺲𐺳𐺴𐺵𐺶𐺷𐺸𐺹𐺺𐺻𐺼𐺽𐺾𐺿𐻀𐻁𐻂𐻃𐻄𐻅𐻆𐻇𐻈𐻉𐻊𐻋𐻌𐻍𐻎𐻏𐻐𐻑𐻒𐻓𐻔𐻕𐻖𐻗𐻘𐻙𐻚𐻛𐻜𐻝𐻞𐻟𐻠𐻡𐻢𐻣𐻤𐻥𐻦𐻧𐻨𐻩
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Fowling was most readily successful on the ponds and backwaters, and the sight of a pool with the birds swimming in a row recalls many such actual groups (1561). They provided the *sekhemkh ab*, or diversion of heart, which delighted the Egyptian (1562). How much was thought of shooting is seen in the many figures of the gods holding the king's hand on his bow, "which teacheth my hands to war and my fingers to fight"; the boy who aimed well was called a "golden shooter" (1563), as we speak of "a golden opportunity." Trapping was more commonly practised, and there was a controller of the bird-net, *abth* (1564). All sports were included in the title "intendant of horns, hoofs, feathers, fish scales, and birds in pools for diversion of heart" (1565). The boat for the fowler has a net spread in it, probably for a trap (1566). The organisation of fishing is often figured by large groups of men hauling in a seine, as directed by a "lieutenant of the gang of fishers of fish for the residence" (1567).

Two different vase signs have often been confused, the upright vase with slight handles belonging to a food provider (N.Bh. I, xvii-xix), and the globular vase with wide handles signifying an inspector, *uu* (1572). An inspector of the office of records, *deqeru* (1568), is named, as also of the "writings of the houses of life," or census returns (1569). The inspectors were royal or local (1570-2); they also acted over the priesthood (1573) in the temple of Amen. The simplest form of the title is 1574.

Two different words are confused together with variants of one sign, the vase drill, weighted with stones at the top, and with a flint held by a fork at the bottom, to cut the hole. The words *ubš* and *hemt* both mean "to bore." If there be a difference in the sign, it would need to be proved by early examples, with the spelling, examined on the original monuments; the printed forms and usage are a mere confusion. The *ubš* was a lower worker, passing into common servants; the *hemuti* became an artist (the man who *sat* to his work), and *hemt* rose to meaning fine art and magic.

The *ubš* or *ubu* (1575-6) were ganged in groups of 10 for mining work (1577); there were intendants over these groups (1577-9), also an "intendant of the intendants of the houses of all workmen of the king" (1581), and a "great workman of the king" (1582). Very early there is a "controller of the registered workmen knowing excellently the heart of his lord" (1584). Hence we pass into the art of the *hemtu*, as the intendant of art of the workmen contrasts the two (1585), and the spelling in "controller of all *hemt* art" is conclusive (1586). There was also the scribe of the intendant of all art (1587), one great in the midst of art (1588), great of high art (1589), and great in art (1590). The training, which must have been long and careful, was "following art," as in the palace intendant of following art (1591), and "in the following of art" (1592); similarly there were pupils of the engravers, *am khet qersti* (1617). The temple building required an intendant of all art of Amen (1593). Another title, which must be kept apart, is the scribe of the temple, *ubš*, in the residence (1594), a palatine chapel. An expert *ubš* or *hemt* cannot be further defined (1595).

An elder *sensuy* is named in Sinai (only one to 60 miners), and an intendant of elders (1596-7), so these were probably foremen. A keeper of the office of *ubau* workmen appears (1598), as well as an intendant of 10 workmen, who were sometimes local Oamu or Bedawy (1599-1600). The gang, *sš* (1601-2), was also of 10 men, as shewn by the names on the great stele of 100 names (Sinai). Another kind of workmen were the *beq* who were registered, see *bek* as workman or servant. An overseer of the sledges for drawing stones is in 1604 (and P.S.C. XII U), and an intendant of servants in 1605.

In building, the usual signs of a man piling a brick wall, or placing a plummet to a stone (538-9), have been noted as referring to brick- and to stone-work, together with many examples of public works (511-46). One of the most usual signs beside the above is *qers* written with a harpoon (1606). The harpoon was in early prehistoric times the principal object made of bone, and came thus to be the sign for bone and ivory. By the Ist dynasty it was made of metal, in a form which originated the hieroglyph (T.W. xlv, 33-5). In the hieroglyph the top strokes are the notch for tying it by the cord, the two lower sloping strokes are the barbs. This harpoon is the earliest strong pointed tool, and naturally it was used to cut in to wood or limestone for lines or patterns. Hence it had the meaning of engraving or sculpture, and also appears in the "cutting by

1575.	B.A.	N.N.	1596	SIN. 106	N.N.
1576	SIN 106	N.N.	1597	VI SIN 16	
1577	VI SIN. 16		1598	XII P C 7	
1578	IV M.M. B 10		1599	SIN 16	
1579	M.K. C. 20631		1600	SIN. 112	
1580	AS. VI. 75		1601	SIN. 112	
1581	XIX L.D. 111, 132		1602	SIN 121	N.N.
1582	B.M.		1603	XII C	
1583	XIX B.T. V. 950		1604	P.S. 111	
1584	III S.M. I		1605	VI S.M. 1, 29	
1585	Ra B.A. 226	N.N.	1606	XII SIN. 85	
1586	IV M.M. C1		1607	XVIII P.N. LXXVIII	
1587	XVIII F 1802		1608	XX Z.A.S. XI, II	P. HARRIS
1588	MAF I, 498		1609	(CHABAS)	
1589	AS. VIII, 65		1610	M.K. C. 20300	
1590	P.A. 47		1611	XII C. 20520	
1591	VI L.D. II, 115 c		1612	B.A.	
1592	VI L.D. II, 115 b-c		1613	V L.D. II, 160	
1593	XVIII N.R.		1614	XII P.S. 170	
1594	PTOL AS XVII, 92	N.N.	1615	M.K. C. 20592	
1595	VI MEIR IV XIV		1616	M.K. C. 20730	

evil," as we say "a cutting misfortune." That it was used to denote an engraver of hieroglyphs is shown by one *qersti* (1606) being named on the great stele of 100 names; an engraver would be of no use in Sinai except for inscriptions. Again, the title appears for the maker of a beautifully engraved stele (1607); again, it has been identified as used for the engravers of stone with the block determinative (1608). It is claimed also as denoting the carvers of funeral coffers (1609). There was an office of sculptors with an intendant (1611), and a palace intendant (1612). A scribe of engraving (1614) was for writing out the text ready for the sculptor. By a play on words, the sign *qes* of Cusae was used as a word sign for an engraver (1615), also for one employed by the vezier (1616). There were naturally a large number of pupils to supply the immense works, recorded as "in the following of engravers" (1617).

Another title very usual in building is *qed*. Following the common form, it was wrongly described as a graver (in No. 540), but Prof. Griffith had published a fine early example shewing it to be a plasterer's float of wood with a loop

handle (*Hieroglyphs*, No. 186). For such an actual tool see *Kahun*, IX, p. 10. The idea of finishing up a building by going round it plastering has provided most of the many meanings of the word—to form or shape a thing, the figure or appearance, the going round or circulating, the qualities or accomplishments of a person, and the “whole altogether” was literally “like plastering,” *ma qed*. It is used, with an evil sign, for perfidy, as we speak of an “accomplished” rascal. It has often been supposed to mean building, but that is provided already with the figures 538, 539. Where detail is shewn, in the brick scene of Rekhmara, there is no *qed* where an unfinished wall is being set up, but only where a man is fitting on the slabs of paving on the ascent (N.R. xx). The *qedet* workmen were not a high class, being only *remtu* (1618). The “scribe *qednu*” is finishing off statues and vases by inscribing them (R.C. lxii).

These fitters had a mayor of the trade, who was otherwise called warden (1619–20), scribes of the men or works are named (1621–2), also an intendant of the messengers of the scribes, and a ganger of the scribes (1623–4). An administrator and intendant of the workmen controlled the work (1625–6). Passing now to the work itself, a scribe of finishing seems to have done actual engraving, as his name appears on the edge of a great family stele, apparently as the executant (1627). Other scribes of the forming or fitting, and an expert, are named (1628–30). Lastly, there is a royal carpenter who completes the building in the palace (1633). Thus there does not seem to be ground for confusing the sign *qed* with the building of the brickwork; the sense of plastering, carpentering, paving, and general fitting-up of the bare shell of brick walls, appears to agree with all the instances.

The more definite technical work is named, mainly in the Leiden papyrus of titles (B.A. 226). The final adjustment and perfecting of a building was by the “sealing husband, engraving” or finishing (1634), the husband being like our “ship’s husband,” and his duty to complete the fine detail. Two titles (1635–6) are together in Sinai, the creator or former, *formatore*, sculptor, and the quarrier, *usho*, from *usha* to break. There are some variants of the *aākhē*, masons (1637–9). The men of monuments probably mean the trained labourers who knew how to move and adjust the stones (1640). The *khemou* are translated as chisellers (1641). The scribes *sepekheru* are the draughtsmen or architects, who drew the surrounding lines or outlines of all the buildings (1642–3).

The *kherti* (1644) are usually rendered masons, but there does not seem any instance where the term may not mean miners, as it implies by the meaning of “those underneath.” The quarries of Turra, south of Cairo, had an intendant in the VIth dynasty (1645), and there must have been a very large staff there in the great days of pyramid building. The warden of the quarrymen (*shot*, “to cut”) at Hammamat (1646) was the leader of the nome. The quarrymen were grouped in gangs, *sā*, of *neter kherti*, originally a tomb cutter in the divine region of the cemetery, and then merely any miner in rock (1647). The *sā* was also written with the amulet sign (1648–9). The management of the quarters of the men was in charge of an overseer of the house of miners (1650). There was an official over the *gotu* of His Majesty (1651); whether this word is a variant of the *kātu* (in brackets here), or some derivation of *qāt*, high, needs more examples to show it. Certainly the usual sign for a miner in Sinai (1652–3), with the arms raised, points to *kātu*, a man of works. The list of chief miners is headed *khernerer reni em hāt*, “miners’ names in heading” (1654). The miners at the gold mines were slaves, men and women, reckoned up for permanent service (1655).

The higher staff comprised *mes oāti*, "devisers of precious stone," or prospectors who searched for sites (1656); *sheny* (1657) who called up the workmen (one in sixty of all); *ozāu* who cut the rock to examine the vein; and *uhā* "to break" (or "to collect") the rock for extracting the turquoise, not common miners, but only one in a hundred. The herd of *kherti* were employed in cutting away all the dead ground to reach the veins in which the turquoise was to be sought. There was provision for the clothing (which wears away quickly amid

1617	𐎠𐎢𐎡𐎢𐎠	B.G. 10	𐎠𐎢𐎡𐎢𐎠	1649	𐎠𐎢𐎡𐎢𐎠	SIN. 121	N.N.
1618	𐎠𐎢𐎡𐎢𐎠	P.A.E.	𐎠𐎢𐎡𐎢𐎠	1650	𐎠𐎢𐎡𐎢𐎠	SIN. 85, 92	𐎠𐎢𐎡𐎢𐎠
1619	𐎠𐎢𐎡𐎢𐎠	A.S. VIII, 256	𐎠𐎢𐎡𐎢𐎠	1651	𐎠𐎢𐎡𐎢𐎠 (𐎠𐎢)	B.M. 709	𐎠𐎢𐎡𐎢𐎠
1620	𐎠𐎢𐎡𐎢𐎠	A.S. VIII 256	𐎠𐎢𐎡𐎢𐎠	1652	𐎠𐎢𐎡𐎢𐎠	SIN 90	𐎠𐎢𐎡𐎢𐎠
1621	𐎠𐎢𐎡𐎢𐎠	VI MEIR. IV. IVA	𐎠𐎢𐎡𐎢𐎠	1653	𐎠𐎢𐎡𐎢𐎠	SIN. 24	𐎠𐎢𐎡𐎢𐎠
1622	𐎠𐎢𐎡𐎢𐎠	B.M.	𐎠𐎢𐎡𐎢𐎠	1654	𐎠𐎢𐎡𐎢𐎠	SIN. 85	List head
1623	𐎠𐎢𐎡𐎢𐎠	MK C. 20309	𐎠𐎢𐎡𐎢𐎠	1655	𐎠𐎢𐎡𐎢𐎠	DE ROUGE	
1624	𐎠𐎢𐎡𐎢𐎠	" "	𐎠𐎢𐎡𐎢𐎠	1656	𐎠𐎢𐎡𐎢𐎠	SIN. 105-6	𐎠𐎢𐎡𐎢𐎠
1625	𐎠𐎢𐎡𐎢𐎠	T. 1522	𐎠𐎢𐎡𐎢𐎠	1657	𐎠𐎢𐎡𐎢𐎠	SIN. 106	N.N.
1626	𐎠𐎢𐎡𐎢𐎠	M.K. C. 20081	𐎠𐎢𐎡𐎢𐎠	1658	𐎠𐎢𐎡𐎢𐎠	SIN 105	𐎠𐎢𐎡𐎢𐎠
1627	𐎠𐎢𐎡𐎢𐎠	XIX PSED. XVIII	𐎠𐎢𐎡𐎢𐎠	1659	𐎠𐎢𐎡𐎢𐎠	SIN. 85, 106	N.N.
1628	𐎠𐎢𐎡𐎢𐎠	VI MEIR. IV. VIII	𐎠𐎢𐎡𐎢𐎠	1660	𐎠𐎢𐎡𐎢𐎠	SIN 35	𐎠𐎢𐎡𐎢𐎠
1629	𐎠𐎢𐎡𐎢𐎠	XIX B.M. L. 1354	𐎠𐎢𐎡𐎢𐎠	1661	𐎠𐎢𐎡𐎢𐎠	MK C. 20520	𐎠𐎢𐎡𐎢𐎠
1630	𐎠𐎢𐎡𐎢𐎠	XIX T. SHAB. 2441	𐎠𐎢𐎡𐎢𐎠	1662	𐎠𐎢𐎡𐎢𐎠	XII SIN. 105	𐎠𐎢𐎡𐎢𐎠
1631	𐎠𐎢𐎡𐎢𐎠	" 2645	𐎠𐎢𐎡𐎢𐎠	1663	𐎠𐎢𐎡𐎢𐎠	II RT II. XXII. 190	𐎠𐎢𐎡𐎢𐎠
1632	𐎠𐎢𐎡𐎢𐎠	VI LD II. 1153	𐎠𐎢𐎡𐎢𐎠	1664	𐎠𐎢𐎡𐎢𐎠	MK. C. 20168	𐎠𐎢𐎡𐎢𐎠
1633	𐎠𐎢𐎡𐎢𐎠	VI B.A. 419	N.N.	1665	𐎠𐎢𐎡𐎢𐎠	MK C. 20594	𐎠𐎢𐎡𐎢𐎠
1634	𐎠𐎢𐎡𐎢𐎠	B.A. 226	N.N.	1666	𐎠𐎢𐎡𐎢𐎠	C. E730	𐎠𐎢𐎡𐎢𐎠
1635	𐎠𐎢𐎡𐎢𐎠	SIN. 85	𐎠𐎢𐎡𐎢𐎠	1667	𐎠𐎢𐎡𐎢𐎠	M.K. C. 20271	𐎠𐎢𐎡𐎢𐎠
1636	𐎠𐎢𐎡𐎢𐎠	SIN. 85	𐎠𐎢𐎡𐎢𐎠	1668	𐎠𐎢𐎡𐎢𐎠	B.A.	N.N.
1637	𐎠𐎢𐎡𐎢𐎠	B.A. 226	N.N.	1669	𐎠𐎢𐎡𐎢𐎠	XIX B.B.E. 26	𐎠𐎢𐎡𐎢𐎠
1638	𐎠𐎢𐎡𐎢𐎠	XX B.A. 230	N.N.	1670	𐎠𐎢𐎡𐎢𐎠	XXVI A.S. XVII. 131	𐎠𐎢𐎡𐎢𐎠
1639	𐎠𐎢𐎡𐎢𐎠	B.A. 294	N.N.	1671	𐎠𐎢𐎡𐎢𐎠	L. V. 107	𐎠𐎢𐎡𐎢𐎠
1640	𐎠𐎢𐎡𐎢𐎠	SIN. 106	N.N.	1672	𐎠𐎢𐎡𐎢𐎠	MK C. 20515	𐎠𐎢𐎡𐎢𐎠
1641	𐎠𐎢𐎡𐎢𐎠	B.A. 226	N.N.	1673	𐎠𐎢𐎡𐎢𐎠	XXVI A.S. XVI. 146	𐎠𐎢𐎡𐎢𐎠
1642	𐎠𐎢𐎡𐎢𐎠	MK C. 20075	𐎠𐎢𐎡𐎢𐎠	1674	𐎠𐎢𐎡𐎢𐎠	IV M.M. C. I	𐎠𐎢𐎡𐎢𐎠
1643	𐎠𐎢𐎡𐎢𐎠	MK C. 20520	𐎠𐎢𐎡𐎢𐎠	1675	𐎠𐎢𐎡𐎢𐎠	XIX A.S. XI. 84, 158	𐎠𐎢𐎡𐎢𐎠
1644	𐎠𐎢𐎡𐎢𐎠	RO. B.A. 226	N.N.	1676	𐎠𐎢𐎡𐎢𐎠	XVIII L.R. 53	𐎠𐎢𐎡𐎢𐎠
1645	𐎠𐎢𐎡𐎢𐎠	VI L. 34	𐎠𐎢𐎡𐎢𐎠	1677	𐎠𐎢𐎡𐎢𐎠	A.S. XIII. 170	𐎠𐎢𐎡𐎢𐎠
1646	𐎠𐎢𐎡𐎢𐎠	XX B.A. 228 = 545	𐎠𐎢𐎡𐎢𐎠	1678	𐎠𐎢𐎡𐎢𐎠	RO B.A. 226	N.N.
1647	𐎠𐎢𐎡𐎢𐎠	SIN. 112 M.K. C. 20397	𐎠𐎢𐎡𐎢𐎠	1679	𐎠𐎢𐎡𐎢𐎠	EBERS p 106	
1648	𐎠𐎢𐎡𐎢𐎠	SIN. 85	𐎠𐎢𐎡𐎢𐎠	1680	𐎠𐎢𐎡𐎢𐎠	B.A. 220	N.N.

the rough sandstone rocks), a man in charge of the wardrobe, *heby* (1660). The expeditions were guarded by soldiers (1661), and an intendant of archers (1662).

The earliest mention of gold work is in the IInd dynasty, when a jeweller was "making sound all things of gold of Nubia and gold of Aām" (1663), which shows that the gold supply then was southern. In the Middle Kingdom is an artist in gold (1664), and an intendant of gold workers (1665). Various forms of the name occur, down to 1672, and there were overseers (1670-1). A goddess

of gold (1673) was worshipped at Edfu. For jewellery in the IVth dynasty there was a controller of the house of amethyst, *thehen* (1674). Artists are often mentioned, who "make alive," *se-onkh* (1675), and one is represented bringing in his gold work from Syria under Tehutmes III. There was a house of artists under an intendant (1676), or under a royal noble (1677). A keeper of the copper vessels is named (1678) parallel to the librarian, called *thay sha*. *Hemem* is a metal worker (1679). A curious name for a jeweller, as shewn by the context, is *neshedti* (see E.G. 87); this seems to be from נִשֶּׁד, *neshed*, usury (1680); the jeweller was naturally ready to lend money on jewels, and so became the pawn-broker. This word belongs to the New Kingdom, and we see from the prophets how common was the taking of a pledge for debt in that period.

The larger metal work was done by smiths, *qäry* (1682), who were all under control by an "over warden of smiths, manager of south and north" (1681); the reversal of the *met* sign seems due to connecting it with the boundaries. The two branches of work were the beating and casting. The massive stone beater held in the palm of the hand (1688) is the determinative of *seshep*, to smooth; this is from *shep*, to flow or run out, applied to blindness (from effusion of lens?), and so beating metal is "causing it to run out," *se-shep*. Gold-beating was done by this means (1683-4); there were expert beaters (1684-5), and an intendant of beating accompanies an intendant of engraving (1686). When melting metal the crucible was not lifted, for fear of its breaking with the weight, as the material was not strong; it sat on the furnace floor and was tilted over to pour out the metal. As it sat, *hems*, it was called *hemt*, like sitting persons—a steersman, an artist, and a woman. The *hemti*, or smelter, of the Treasury is in 1691, and the smelter of the smelting-house (*ne shemä*) in 1692. The smelters had messengers, under an intendant (1694). The *bobo* (1695) are rendered "smelters" by Brugsch, but the meaning "to be clear" or "pure" (*bobo*) points to a refiner. *Bobo* is a duplication of *bo*, "to shine." For once, the tools are named (1696) by a "chief engraver (*thänu*) graving (*besen*) metal for Amen"; the *besent*, graving tool, seems probably a foreign word.

Carpenters are first designated by chisels (set on the side of the handle) and graving points of harpoons (1697). What the lion with an emblem on the back means, here and elsewhere, is not yet known (see 1911). The axe appears in the IIIrd dynasty (1698, and onward to 1704). The *hu* axe-man (1702) seems to be a carpenter by its position in the list. There follows the boat-builder of Ptah (1703), and another (1704). The usual name for the worker with the adze was *nezar* (1705), which seems to have lasted on in Egypt as *nejar* for a carpenter. The mortise-cutting with chisel and mallet was *shen*, "to join"; the quotation given for this (Pierret, 587) should read *shen em ek*, "join in thee," as the *m* does not seem to belong to the radical according to 1706. Sewing was *ust*, in 1707. The word *neper* (1708), as stated to mean a border, will have to be modified if it accords with the adzing scene in L.D. II, 49. Lastly, there are the artizans of chariot-building, work that needed the highest care in joinery, owing to the slight construction and the heavy shocks which befell it (1709-10).

The baker was named *retehti*, of which there are variants (1711-12), and *khenti* (1713). The various kinds of bread and cakes are listed in the Hood Papyrus; 1714 *shoy*, probably crumbly bread, from *shou*, sand; 1715 *rehusa*, from רָהַשׁ, to swell or boil up, as puff paste; 1716 *bat* bread in tall conical loaves of *beti* corn; 1717 *persä*, from פָּרַס, to break, as shortbread; 1718 *thairir*, from בָּרַר, to bind up, or a bundle, as a turn-over cake. The next two,

1719-20, separated by Brugsch, are more probably all one, as Maspero read them, the maker of jars of date conserve, *benerati*; the same conserve appears in 1721-2-3, for the palace of Amenhetep III (1722), and a sealer for the manager to close the jars in 1723. Lastly, in 1724, an intendant of the house of sweetmeats (1724), who is only dealing with cakes, and not meats. The intendant of the mill for *heth* bread, and for *besk* bread, is named (1725-6), the difference of milling being perhaps as for our brown and white flour.

Weaving is sometimes named, as in the list of trades, the *sekhan* (1727),

1681 𓆎𓆏𓆐𓆑𓆒𓆓𓆔𓆕𓆖𓆗𓆘𓆙𓆚𓆛𓆜𓆝𓆞𓆟𓆠𓆡𓆢𓆣𓆤𓆥𓆦𓆧𓆨𓆩𓆪𓆫𓆬𓆭𓆮𓆯𓆰𓆱𓆲𓆳𓆴𓆵𓆶𓆷𓆸𓆹𓆺𓆻𓆼𓆽𓆾𓆿𓇀𓇁𓇂𓇃𓇄𓇅𓇆𓇇𓇈𓇉𓇊𓇋𓇌𓇍𓇎𓇏𓇐𓇑𓇒𓇓𓇔𓇕𓇖𓇗𓇘𓇙𓇚𓇛𓇜𓇝𓇞𓇟𓇠𓇡𓇢𓇣𓇤𓇥𓇦𓇧𓇨𓇩𓇪𓇫𓇬𓇭𓇮𓇯𓇰𓇱𓇲𓇳𓇴𓇵𓇶𓇷𓇸𓇹𓇺𓇻𓇼𓇽𓇾𓇿𓈀𓈁𓈂𓈃𓈄𓈅𓈆𓈇𓈈𓈉𓈊𓈋𓈌𓈍𓈎𓈏𓈐𓈑𓈒𓈓𓈔𓈕𓈖𓈗𓈘𓈙𓈚𓈛𓈜𓈝𓈞𓈟𓈠𓈡𓈢𓈣𓈤𓈥𓈦𓈧𓈨𓈩𓈪𓈫𓈬𓈭𓈮𓈯𓈰𓈱𓈲𓈳𓈴𓈵𓈶𓈷𓈸𓈹𓈺𓈻𓈼𓈽𓈾𓈿𓉀𓉁𓉂𓉃𓉄𓉅𓉆𓉇𓉈𓉉𓉊𓉋𓉌𓉍𓉎𓉏𓉐𓉑𓉒𓉓𓉔𓉕𓉖𓉗𓉘𓉙𓉚𓉛𓉜𓉝𓉞𓉟𓉠𓉡𓉢𓉣𓉤𓉥𓉦𓉧𓉨𓉩𓉪𓉫𓉬𓉭𓉮𓉯𓉰𓉱𓉲𓉳𓉴𓉵𓉶𓉷𓉸𓉹𓉺𓉻𓉼𓉽𓉾𓉿𓊀𓊁𓊂𓊃𓊄𓊅𓊆𓊇𓊈𓊉𓊊𓊋𓊌𓊍𓊎𓊏𓊐𓊑𓊒𓊓𓊔𓊕𓊖𓊗𓊘𓊙𓊚𓊛𓊜𓊝𓊞𓊟𓊠𓊡𓊢𓊣𓊤𓊥𓊦𓊧𓊨𓊩𓊪𓊫𓊬𓊭𓊮𓊯𓊰𓊱𓊲𓊳𓊴𓊵𓊶𓊷𓊸𓊹𓊺𓊻𓊼𓊽𓊾𓊿𓋀𓋁𓋂𓋃𓋄𓋅𓋆𓋇𓋈𓋉𓋊𓋋𓋌𓋍𓋎𓋏𓋐𓋑𓋒𓋓𓋔𓋕𓋖𓋗𓋘𓋙𓋚𓋛𓋜𓋝𓋞𓋟𓋠𓋡𓋢𓋣𓋤𓋥𓋦𓋧𓋨𓋩𓋪𓋫𓋬𓋭𓋮𓋯𓋰𓋱𓋲𓋳𓋴𓋵𓋶𓋷𓋸𓋹𓋺𓋻𓋼𓋽𓋾𓋿𓌀𓌁𓌂𓌃𓌄𓌅𓌆𓌇𓌈𓌉𓌊𓌋𓌌𓌍𓌎𓌏𓌐𓌑𓌒𓌓𓌔𓌕𓌖𓌗𓌘𓌙𓌚𓌛𓌜𓌝𓌞𓌟𓌠𓌡𓌢𓌣𓌤𓌥𓌦𓌧𓌨𓌩𓌪𓌫𓌬𓌭𓌮𓌯𓌰𓌱𓌲𓌳𓌴𓌵𓌶𓌷𓌸𓌹𓌺𓌻𓌼𓌽𓌾𓌿𓍀𓍁𓍂𓍃𓍄𓍅𓍆𓍇𓍈𓍉𓍊𓍋𓍌𓍍𓍎𓍏𓍐𓍑𓍒𓍓𓍔𓍕𓍖𓍗𓍘𓍙𓍚𓍛𓍜𓍝𓍞𓍟𓍠𓍡𓍢𓍣𓍤𓍥𓍦𓍧𓍨𓍩𓍪𓍫𓍬𓍭𓍮𓍯𓍰𓍱𓍲𓍳𓍴𓍵𓍶𓍷𓍸𓍹𓍺𓍻𓍼𓍽𓍾𓍿𓎀𓎁𓎂𓎃𓎄𓎅𓎆𓎇𓎈𓎉𓎊𓎋𓎌𓎍𓎎𓎏𓎐𓎑𓎒𓎓𓎔𓎕𓎖𓎗𓎘𓎙𓎚𓎛𓎜𓎝𓎞𓎟𓎠𓎡𓎢𓎣𓎤𓎥𓎦𓎧𓎨𓎩𓎪𓎫𓎬𓎭𓎮𓎯𓎰𓎱𓎲𓎳𓎴𓎵𓎶𓎷𓎸𓎹𓎺𓎻𓎼𓎽𓎾𓎿𓏀𓏁𓏂𓏃𓏄𓏅𓏆𓏇𓏈𓏉𓏊𓏋𓏌𓏍𓏎𓏏𓏐𓏑𓏒𓏓𓏔𓏕𓏖𓏗𓏘𓏙𓏚𓏛𓏜𓏝𓏞𓏟𓏠𓏡𓏢𓏣𓏤𓏥𓏦𓏧𓏨𓏩𓏪𓏫𓏬𓏭𓏮𓏯𓏰𓏱𓏲𓏳𓏴𓏵𓏶𓏷𓏸𓏹𓏺𓏻𓏼𓏽𓏾𓏿𓐀𓐁𓐂𓐃𓐄𓐅𓐆𓐇𓐈𓐉𓐊𓐋𓐌𓐍𓐎𓐏𓐐𓐑𓐒𓐓𓐔𓐕𓐖𓐗𓐘𓐙𓐚𓐛𓐜𓐝𓐞𓐟𓐠𓐡𓐢𓐣𓐤𓐥𓐦𓐧𓐨𓐩𓐪𓐫𓐬𓐭𓐮𓐯𓐰𓐱𓐲𓐳𓐴𓐵𓐶𓐷𓐸𓐹𓐺𓐻𓐼𓐽𓐾𓐿𓑀𓑁𓑂𓑃𓑄𓑅𓑆𓑇𓑈𓑉𓑊𓑋𓑌𓑍𓑎𓑏𓑐𓑑𓑒𓑓𓑔𓑕𓑖𓑗𓑘𓑙𓑚𓑛𓑜𓑝𓑞𓑟𓑠𓑡𓑢𓑣𓑤𓑥𓑦𓑧𓑨𓑩𓑪𓑫𓑬𓑭𓑮𓑯𓑰𓑱𓑲𓑳𓑴𓑵𓑶𓑷𓑸𓑹𓑺𓑻𓑼𓑽𓑾𓑿𓒀𓒁𓒂𓒃𓒄𓒅𓒆𓒇𓒈𓒉𓒊𓒋𓒌𓒍𓒎𓒏𓒐𓒑𓒒𓒓𓒔𓒕𓒖𓒗𓒘𓒙𓒚𓒛𓒜𓒝𓒞𓒟𓒠𓒡𓒢𓒣𓒤𓒥𓒦𓒧𓒨𓒩𓒪𓒫𓒬𓒭𓒮𓒯𓒰𓒱𓒲𓒳𓒴𓒵𓒶𓒷𓒸𓒹𓒺𓒻𓒼𓒽𓒾𓒿𓓀𓓁𓓂𓓃𓓄𓓅𓓆𓓇𓓈𓓉𓓊𓓋𓓌𓓍𓓎𓓏𓓐𓓑𓓒𓓓𓓔𓓕𓓖𓓗𓓘𓓙𓓚𓓛𓓜𓓝𓓞𓓟𓓠𓓡𓓢𓓣𓓤𓓥𓓦𓓧𓓨𓓩𓓪𓓫𓓬𓓭𓓮𓓯𓓰𓓱𓓲𓓳𓓴𓓵𓓶𓓷𓓸𓓹𓓺𓓻𓓼𓓽𓓾𓓿𓔀𓔁𓔂𓔃𓔄𓔅𓔆𓔇𓔈𓔉𓔊𓔋𓔌𓔍𓔎𓔏𓔐𓔑𓔒𓔓𓔔𓔕𓔖𓔗𓔘𓔙𓔚𓔛𓔜𓔝𓔞𓔟𓔠𓔡𓔢𓔣𓔤𓔥𓔦𓔧𓔨𓔩𓔪𓔫𓔬𓔭𓔮𓔯𓔰𓔱𓔲𓔳𓔴𓔵𓔶𓔷𓔸𓔹𓔺𓔻𓔼𓔽𓔾𓔿𓕀𓕁𓕂𓕃𓕄𓕅𓕆𓕇𓕈𓕉𓕊𓕋𓕌𓕍𓕎𓕏𓕐𓕑𓕒𓕓𓕔𓕕𓕖𓕗𓕘𓕙𓕚𓕛𓕜𓕝𓕞𓕟𓕠𓕡𓕢𓕣𓕤𓕥𓕦𓕧𓕨𓕩𓕪𓕫𓕬𓕭𓕮𓕯𓕰𓕱𓕲𓕳𓕴𓕵𓕶𓕷𓕸𓕹𓕺𓕻𓕼𓕽𓕾𓕿𓖀𓖁𓖂𓖃𓖄𓖅𓖆𓖇𓖈𓖉𓖊𓖋𓖌𓖍𓖎𓖏𓖐𓖑𓖒𓖓𓖔𓖕𓖖𓖗𓖘𓖙𓖚𓖛𓖜𓖝𓖞𓖟𓖠𓖡𓖢𓖣𓖤𓖥𓖦𓖧𓖨𓖩𓖪𓖫𓖬𓖭𓖮𓖯𓖰𓖱𓖲𓖳𓖴𓖵𓖶𓖷𓖸𓖹𓖺𓖻𓖼𓖽𓖾𓖿𓗀𓗁𓗂𓗃𓗄𓗅𓗆𓗇𓗈𓗉𓗊𓗋𓗌𓗍𓗎𓗏𓗐𓗑𓗒𓗓𓗔𓗕𓗖𓗗𓗘𓗙𓗚𓗛𓗜𓗝𓗞𓗟𓗠𓗡𓗢𓗣𓗤𓗥𓗦𓗧𓗨𓗩𓗪𓗫𓗬𓗭𓗮𓗯𓗰𓗱𓗲𓗳𓗴𓗵𓗶𓗷𓗸𓗹𓗺𓗻𓗼𓗽𓗾𓗿𓘀𓘁𓘂𓘃𓘄𓘅𓘆𓘇𓘈𓘉𓘊𓘋𓘌𓘍𓘎𓘏𓘐𓘑𓘒𓘓𓘔𓘕𓘖𓘗𓘘𓘙𓘚𓘛𓘜𓘝𓘞𓘟𓘠𓘡𓘢𓘣𓘤𓘥𓘦𓘧𓘨𓘩𓘪𓘫𓘬𓘭𓘮𓘯𓘰𓘱𓘲𓘳𓘴𓘵𓘶𓘷𓘸𓘹𓘺𓘻𓘼𓘽𓘾𓘿𓙀𓙁𓙂𓙃𓙄𓙅𓙆𓙇𓙈𓙉𓙊𓙋𓙌𓙍𓙎𓙏𓙐𓙑𓙒𓙓𓙔𓙕𓙖𓙗𓙘𓙙𓙚𓙛𓙜𓙝𓙞𓙟𓙠𓙡𓙢𓙣𓙤𓙥𓙦𓙧𓙨𓙩𓙪𓙫𓙬𓙭𓙮𓙯𓙰𓙱𓙲𓙳𓙴𓙵𓙶𓙷𓙸𓙹𓙺𓙻𓙼𓙽𓙾𓙿𓚀𓚁𓚂𓚃𓚄𓚅𓚆𓚇𓚈𓚉𓚊𓚋𓚌𓚍𓚎𓚏𓚐𓚑𓚒𓚓𓚔𓚕𓚖𓚗𓚘𓚙𓚚𓚛𓚜𓚝𓚞𓚟𓚠𓚡𓚢𓚣𓚤𓚥𓚦𓚧𓚨𓚩𓚪𓚫𓚬𓚭𓚮𓚯𓚰𓚱𓚲𓚳𓚴𓚵𓚶𓚷𓚸𓚹𓚺𓚻𓚼𓚽𓚾𓚿𓛀𓛁𓛂𓛃𓛄𓛅𓛆𓛇𓛈𓛉𓛊𓛋𓛌𓛍𓛎𓛏𓛐𓛑𓛒𓛓𓛔𓛕𓛖𓛗𓛘𓛙𓛚𓛛𓛜𓛝𓛞𓛟𓛠𓛡𓛢𓛣𓛤𓛥𓛦𓛧𓛨𓛩𓛪𓛫𓛬𓛭𓛮𓛯𓛰𓛱𓛲𓛳𓛴𓛵𓛶𓛷𓛸𓛹𓛺𓛻𓛼𓛽𓛾𓛿𓜀𓜁𓜂𓜃𓜄𓜅𓜆𓜇𓜈𓜉𓜊𓜋𓜌𓜍𓜎𓜏𓜐𓜑𓜒𓜓𓜔𓜕𓜖𓜗𓜘𓜙𓜚𓜛𓜜𓜝𓜞𓜟𓜠𓜡𓜢𓜣𓜤𓜥𓜦𓜧𓜨𓜩𓜪𓜫𓜬𓜭𓜮𓜯𓜰𓜱𓜲𓜳𓜴𓜵𓜶𓜷𓜸𓜹𓜺𓜻𓜼𓜽𓜾𓜿𓝀𓝁𓝂𓝃𓝄𓝅𓝆𓝇𓝈𓝉𓝊𓝋𓝌𓝍𓝎𓝏𓝐𓝑𓝒𓝓𓝔𓝕𓝖𓝗𓝘𓝙𓝚𓝛𓝜𓝝𓝞𓝟𓝠𓝡𓝢𓝣𓝤𓝥𓝦𓝧𓝨𓝩𓝪𓝫𓝬𓝭𓝮𓝯𓝰𓝱𓝲𓝳𓝴𓝵𓝶𓝷𓝸𓝹𓝺𓝻𓝼𓝽𓝾𓝿𓞀𓞁𓞂𓞃𓞄𓞅𓞆𓞇𓞈𓞉𓞊𓞋𓞌𓞍𓞎𓞏𓞐𓞑𓞒𓞓𓞔𓞕𓞖𓞗𓞘𓞙𓞚𓞛𓞜𓞝𓞞𓞟𓞠𓞡𓞢𓞣𓞤𓞥𓞦𓞧𓞨𓞩𓞪𓞫𓞬𓞭𓞮𓞯𓞰𓞱𓞲𓞳𓞴𓞵𓞶𓞷𓞸𓞹𓞺𓞻𓞼𓞽𓞾𓞿𓟀𓟁𓟂𓟃𓟄𓟅𓟆𓟇𓟈𓟉𓟊𓟋𓟌𓟍𓟎𓟏𓟐𓟑𓟒𓟓𓟔𓟕𓟖𓟗𓟘𓟙𓟚𓟛𓟜𓟝𓟞𓟟𓟠𓟡𓟢𓟣𓟤𓟥𓟦𓟧𓟨𓟩𓟪𓟫𓟬𓟭𓟮𓟯𓟰𓟱𓟲𓟳𓟴𓟵𓟶𓟷𓟸𓟹𓟺𓟻𓟼𓟽𓟾𓟿𓠀𓠁𓠂𓠃𓠄𓠅𓠆𓠇𓠈𓠉𓠊𓠋𓠌𓠍𓠎𓠏𓠐𓠑𓠒𓠓𓠔𓠕𓠖𓠗𓠘𓠙𓠚𓠛𓠜𓠝𓠞𓠟𓠠𓠡𓠢𓠣𓠤𓠥𓠦𓠧𓠨𓠩𓠪𓠫𓠬𓠭𓠮𓠯𓠰𓠱𓠲𓠳𓠴𓠵𓠶𓠷𓠸𓠹𓠺𓠻𓠼𓠽𓠾𓠿𓡀𓡁𓡂𓡃𓡄𓡅𓡆𓡇𓡈𓡉𓡊𓡋𓡌𓡍𓡎𓡏𓡐𓡑𓡒𓡓𓡔𓡕𓡖𓡗𓡘𓡙𓡚𓡛𓡜𓡝𓡞𓡟𓡠𓡡𓡢𓡣𓡤𓡥𓡦𓡧𓡨𓡩𓡪𓡫𓡬𓡭𓡮𓡯𓡰𓡱𓡲𓡳𓡴𓡵𓡶𓡷𓡸𓡹𓡺𓡻𓡼𓡽𓡾𓡿𓢀𓢁𓢂𓢃𓢄𓢅𓢆𓢇𓢈𓢉𓢊𓢋𓢌𓢍𓢎𓢏𓢐𓢑𓢒𓢓𓢔𓢕𓢖𓢗𓢘𓢙𓢚𓢛𓢜𓢝𓢞𓢟𓢠𓢡𓢢𓢣𓢤𓢥𓢦𓢧𓢨𓢩𓢪𓢫𓢬𓢭𓢮𓢯𓢰𓢱𓢲𓢳𓢴𓢵𓢶𓢷𓢸𓢹𓢺𓢻𓢼𓢽𓢾𓢿𓣀𓣁𓣂𓣃𓣄𓣅𓣆𓣇𓣈𓣉𓣊𓣋𓣌𓣍𓣎𓣏𓣐𓣑𓣒𓣓𓣔𓣕𓣖𓣗𓣘𓣙𓣚𓣛𓣜𓣝𓣞𓣟𓣠𓣡𓣢𓣣𓣤𓣥𓣦𓣧𓣨𓣩𓣪𓣫𓣬𓣭𓣮𓣯𓣰𓣱𓣲𓣳𓣴𓣵𓣶𓣷𓣸𓣹𓣺𓣻𓣼𓣽𓣾𓣿𓤀𓤁𓤂𓤃𓤄𓤅𓤆𓤇𓤈𓤉𓤊𓤋𓤌𓤍𓤎𓤏𓤐𓤑𓤒𓤓𓤔𓤕𓤖𓤗𓤘𓤙𓤚𓤛𓤜𓤝𓤞𓤟𓤠𓤡𓤢𓤣𓤤𓤥𓤦𓤧𓤨𓤩𓤪𓤫𓤬𓤭𓤮𓤯𓤰𓤱𓤲𓤳𓤴𓤵𓤶𓤷𓤸𓤹𓤺𓤻𓤼𓤽𓤾𓤿𓥀𓥁𓥂𓥃𓥄𓥅𓥆𓥇𓥈𓥉𓥊𓥋𓥌𓥍𓥎𓥏𓥐𓥑𓥒𓥓𓥔𓥕𓥖𓥗𓥘𓥙𓥚𓥛𓥜𓥝𓥞𓥟𓥠𓥡𓥢𓥣𓥤𓥥𓥦𓥧𓥨𓥩𓥪𓥫𓥬𓥭𓥮𓥯𓥰𓥱𓥲𓥳𓥴𓥵𓥶𓥷𓥸𓥹𓥺𓥻𓥼𓥽𓥾𓥿𓦀𓦁𓦂𓦃𓦄𓦅𓦆𓦇𓦈𓦉𓦊𓦋𓦌𓦍𓦎𓦏𓦐𓦑𓦒𓦓𓦔𓦕𓦖𓦗𓦘𓦙𓦚𓦛𓦜𓦝𓦞𓦟𓦠𓦡𓦢𓦣𓦤𓦥𓦦𓦧𓦨𓦩𓦪𓦫𓦬𓦭𓦮𓦯𓦰𓦱𓦲𓦳𓦴𓦵𓦶𓦷𓦸𓦹𓦺𓦻𓦼𓦽𓦾𓦿𓧀𓧁𓧂𓧃𓧄𓧅𓧆𓧇𓧈𓧉𓧊𓧋𓧌𓧍𓧎𓧏𓧐𓧑𓧒𓧓𓧔𓧕𓧖𓧗𓧘𓧙𓧚𓧛𓧜𓧝𓧞𓧟𓧠𓧡𓧢𓧣𓧤𓧥𓧦𓧧𓧨𓧩𓧪𓧫𓧬𓧭𓧮𓧯𓧰𓧱𓧲𓧳𓧴𓧵𓧶𓧷𓧸𓧹𓧺𓧻𓧼𓧽𓧾𓧿𓨀𓨁𓨂𓨃𓨄𓨅𓨆𓨇𓨈𓨉𓨊𓨋𓨌𓨍𓨎𓨏𓨐𓨑𓨒𓨓𓨔𓨕𓨖𓨗𓨘𓨙𓨚𓨛𓨜𓨝𓨞𓨟𓨠𓨡𓨢𓨣𓨤𓨥𓨦𓨧𓨨𓨩𓨪𓨫𓨬𓨭𓨮𓨯𓨰𓨱𓨲𓨳𓨴𓨵𓨶𓨷𓨸𓨹𓨺𓨻𓨼𓨽𓨾𓨿𓩀𓩁𓩂𓩃𓩄𓩅𓩆𓩇𓩈𓩉𓩊𓩋𓩌𓩍𓩎𓩏𓩐𓩑𓩒𓩓𓩔𓩕𓩖𓩗𓩘𓩙𓩚𓩛𓩜𓩝𓩞𓩟𓩠𓩡𓩢𓩣𓩤𓩥𓩦𓩧𓩨𓩩𓩪𓩫𓩬𓩭𓩮𓩯𓩰𓩱𓩲𓩳𓩴𓩵𓩶𓩷𓩸𓩹𓩺𓩻𓩼𓩽𓩾𓩿𓪀𓪁𓪂𓪃𓪄𓪅𓪆𓪇𓪈𓪉𓪊𓪋𓪌𓪍𓪎𓪏𓪐𓪑𓪒𓪓𓪔𓪕𓪖𓪗𓪘𓪙𓪚𓪛𓪜𓪝𓪞𓪟𓪠𓪡𓪢𓪣𓪤𓪥𓪦𓪧𓪨𓪩𓪪𓪫𓪬𓪭𓪮𓪯𓪰𓪱𓪲𓪳𓪴𓪵𓪶𓪷𓪸𓪹𓪺𓪻𓪼𓪽𓪾𓪿𓫀𓫁𓫂𓫃𓫄𓫅𓫆𓫇𓫈𓫉𓫊𓫋𓫌𓫍𓫎𓫏𓫐𓫑𓫒𓫓𓫔𓫕𓫖𓫗𓫘𓫙𓫚𓫛𓫜𓫝𓫞𓫟𓫠𓫡𓫢𓫣𓫤𓫥𓫦𓫧𓫨𓫩𓫪𓫫𓫬𓫭𓫮𓫯𓫰𓫱𓫲𓫳𓫴𓫵𓫶𓫷𓫸𓫹𓫺𓫻𓫼𓫽𓫾𓫿𓬀𓬁𓬂𓬃𓬄𓬅𓬆𓬇𓬈𓬉𓬊𓬋𓬌𓬍𓬎𓬏𓬐𓬑𓬒𓬓𓬔𓬕𓬖𓬗𓬘𓬙𓬚𓬛𓬜𓬝𓬞𓬟𓬠𓬡𓬢𓬣𓬤𓬥𓬦𓬧𓬨𓬩𓬪𓬫𓬬𓬭𓬮𓬯𓬰𓬱𓬲𓬳𓬴𓬵𓬶𓬷𓬸𓬹𓬺𓬻𓬼𓬽𓬾𓬿𓭀𓭁𓭂𓭃𓭄𓭅𓭆𓭇𓭈𓭉𓭊𓭋𓭌𓭍𓭎𓭏𓭐𓭑𓭒𓭓𓭔𓭕𓭖𓭗𓭘𓭙𓭚𓭛𓭜𓭝𓭞𓭟𓭠𓭡𓭢𓭣𓭤𓭥𓭦𓭧𓭨𓭩𓭪𓭫𓭬𓭭𓭮𓭯𓭰𓭱𓭲𓭳𓭴𓭵𓭶𓭷𓭸𓭹𓭺𓭻𓭼𓭽𓭾𓭿𓮀𓮁𓮂𓮃𓮄𓮅𓮆𓮇𓮈𓮉𓮊𓮋𓮌𓮍𓮎𓮏𓮐𓮑𓮒𓮓𓮔𓮕𓮖𓮗𓮘𓮙𓮚𓮛𓮜𓮝𓮞𓮟𓮠𓮡𓮢𓮣𓮤𓮥𓮦𓮧𓮨𓮩𓮪𓮫𓮬𓮭𓮮𓮯𓮰𓮱𓮲𓮳𓮴𓮵𓮶𓮷𓮸𓮹𓮺𓮻𓮼𓮽𓮾𓮿𓯀𓯁𓯂𓯃𓯄𓯅𓯆𓯇𓯈𓯉𓯊𓯋𓯌𓯍𓯎𓯏𓯐𓯑𓯒𓯓𓯔𓯕𓯖𓯗𓯘𓯙𓯚𓯛𓯜𓯝𓯞𓯟𓯠𓯡𓯢𓯣𓯤𓯥𓯦𓯧𓯨𓯩𓯪𓯫𓯬𓯭𓯮𓯯𓯰𓯱𓯲𓯳𓯴𓯵𓯶𓯷𓯸𓯹𓯺𓯻𓯼𓯽𓯾𓯿𓰀𓰁𓰂𓰃𓰄𓰅𓰆𓰇𓰈𓰉𓰊𓰋𓰌𓰍𓰎𓰏𓰐𓰑𓰒𓰓𓰔𓰕𓰖𓰗𓰘𓰙𓰚𓰛𓰜𓰝𓰞𓰟𓰠𓰡𓰢𓰣𓰤𓰥𓰦𓰧𓰨𓰩𓰪𓰫𓰬𓰭𓰮𓰯𓰰𓰱𓰲𓰳𓰴𓰵𓰶𓰷𓰸𓰹𓰺𓰻𓰼𓰽𓰾𓰿𓱀𓱁𓱂𓱃𓱄𓱅𓱆𓱇𓱈𓱉𓱊𓱋𓱌𓱍𓱎𓱏𓱐𓱑𓱒𓱓𓱔𓱕𓱖𓱗𓱘𓱙𓱚𓱛𓱜𓱝𓱞𓱟𓱠𓱡𓱢𓱣𓱤𓱥𓱦𓱧𓱨𓱩𓱪𓱫𓱬𓱭𓱮𓱯𓱰𓱱𓱲𓱳𓱴𓱵𓱶𓱷𓱸𓱹𓱺𓱻𓱼𓱽𓱾𓱿𓲀𓲁𓲂𓲃𓲄𓲅𓲆𓲇𓲈𓲉𓲊𓲋𓲌𓲍𓲎𓲏𓲐𓲑𓲒𓲓𓲔𓲕𓲖𓲗𓲘𓲙𓲚𓲛𓲜𓲝𓲞𓲟𓲠𓲡𓲢𓲣𓲤𓲥𓲦𓲧𓲨𓲩𓲪𓲫𓲬𓲭𓲮𓲯𓲰𓲱𓲲𓲳𓲴𓲵𓲶𓲷𓲸𓲹𓲺𓲻𓲼𓲽𓲾𓲿𓳀𓳁𓳂𓳃𓳄𓳅𓳆𓳇𓳈𓳉𓳊𓳋𓳌𓳍𓳎𓳏𓳐𓳑𓳒𓳓𓳔𓳕𓳖𓳗𓳘𓳙𓳚𓳛𓳜𓳝𓳞𓳟𓳠𓳡𓳢𓳣𓳤𓳥𓳦𓳧𓳨𓳩𓳪𓳫𓳬𓳭𓳮𓳯𓳰𓳱𓳲𓳳𓳴𓳵𓳶𓳷𓳸𓳹𓳺𓳻𓳼𓳽𓳾𓳿𓴀𓴁𓴂𓴃𓴄𓴅𓴆𓴇𓴈𓴉𓴊𓴋𓴌𓴍𓴎𓴏𓴐𓴑𓴒𓴓𓴔𓴕𓴖𓴗𓴘𓴙𓴚𓴛𓴜𓴝𓴞𓴟𓴠𓴡𓴢𓴣𓴤𓴥𓴦𓴧𓴨𓴩𓴪𓴫𓴬𓴭𓴮𓴯𓴰𓴱𓴲𓴳𓴴𓴵𓴶𓴷𓴸𓴹𓴺𓴻𓴼𓴽𓴾𓴿𓵀𓵁𓵂𓵃𓵄𓵅

overseer (1734), who was son of the overseer of the same factory when belonging to the *neter duat* (queen) *ākh*, or the "majestic queen."

Matting has always been a great trade in dry and dusty Egypt, and a modern mat is identical in fabric with those of the Ist dynasty. The sign in 1735-6 has been rendered basket or mat, but mat seems much more likely in the latter instance. In 1737 *psesh* means "to divide," hence "in the midst" according to Maspero; the connection with the domestic holding a mat is not obvious. In a Roman list the bearer of the *qena*, carrying-chair (1738), and the bearer of the *nu*, water-bottle (1739), are among servants. The maker of *mozair* (1740) refers to garlands, by the determinative, and the root *mezer* is to surround or restrain.

Domestic officials are the keeper of the ointment (1741), the controller of washers (1742), the horn *ab* being used instead of the alphabetic signs, and the determinative being women, as also for brewing; it is notable that these offices were held by one of the most powerful nobles. The washing-book when travelling was kept by a "scribe of the king's washing of his things at following," or in his progresses (1743). Nurses, *menot*, were always held in honour (1746), also a great nurse (1747). Royal nurses of the king's children occur mostly in the XVIIIth dynasty (1749-50), and the same term was applied to the tutors, as that of Prince Uazmes (1751).

There was an official "for transport," *mo sebui* (1752), and a "bearer for the *hāni* vase" (1753), the purpose of which we do not know.

The control of imports and exports was fully regulated in late times, and even in the IIInd dynasty there were sealers of northern tribute (806-7). The guard over the coast was by the "intendant of the mouths of canals of the lowlands" (1754). A secretary kept count of the entrance-gate of the south and north (1755). A warden of the dues of the land in its limits (1756) received the customs; the word *shet* here, with the cross determinative of cutting, is kin to *shot*, cut off, *shed*, cut off, and *shed*, customs dues, on the Pithom stele. There were official records of customs kept by the "over-keeper of records of the office of the great green sea" (1757), and deputy intendant sealer of the office of the great green sea (1758). A scribe of the collection (1759) is for the customs, also a scribe of the counting (1760); all this class of officials (1754-60) belong together in the list.

The deserts are often mentioned, both for protection from the desert tribes and as a source of gold and valuable stone. There were intendants of the south deserts (1761), of the *khāst* or desert people of *kens*, Nubia (1762), and of the desert for gold, or gold of Amen (1763-4). Rarely there is the eastern desert named (1765) or the expert of roads at Hammamat (1766). The deserts in general are mentioned (1768, 1771), and the gate of the desert (1769-70), probably at the cataract. One official "brought the affairs of all the deserts for his lord Horus," the king (1772), and a scribe was intendant of the desert offices of the queen (1773). The western deserts are more often named, owing to the oasis roads and tribes; the desert of Memphis (1775), of Thebes (1776), and Mentuhetep the vezier was the pillar of the north and intendant of the western deserts (1774, 1777). A wide authority extended over the lands of Kharu and Kesh—Syria and Nubia (1778). A ruler was over the Egyptian towns of the north (1779), and one "reckoned the deeds (*outi*) of royal land in all northern countries" (1780). In Sinai there was an intendant of the desert over the archers (1781). A home office was secretary of the month (ordering) of all deserts (1782); situated as Egypt was, the lill sign was equally used for foreign land or desert.

1741	4-17	XII N.Bh.I, 45	1772	...	V S.U.I, 123
1742	...	III S.M.I, 1	1773	...	XVIII P.S. CONE 21
1743	...	S.U.II, 201	1774	...	XII REC X 144
1744	...	XII N.Bh.I, 49	1775	...	B.M.
1745	" "	(1000) M.K.C. 20588	1776	...	XIX B.M.
1746	...	XII N.Bh.I, 47	1777	...	C. 20539
1747	...	L.R. 116	1778	...	XXII, P.H.
1748	...	PTOL. A.S. XVII, 90	1779	...	XII, M.A.B. II, 23
1749	...	A.S. II, 198	1780	...	S.U. II, 120
1750	...	XVIII, L.R. 67	1781	...	SIN. 294
1751	...	L.D. III, 11-13	1782	...	IV-V L.D. II, 100
1752	...	XXII P.H. 96	1783	...	A.S. XX, 129-31-39
1753	...	XXII P.H. 72	1784	...	XIX Z.A.S. III, 29
1754	...	XXII P.H. 46	1785	...	T
1755	...	VI A.S. XVI, 195	1786	...	P.A. I, 10
1756	...	XXII, P.H. 47	1787	...	T. 3069
1757	...	XXII P.H. 50	1788	...	P.S. CONE
1758	...	XXII P.H. 42	1789	...	C.M. 40
1759	...	XXII P.H. 45	1790	...	B.M. ATU
1760	...	XXII P.H. 44	1791	...	A.S. VIII, 53
1761	...	XIX A.S. XX, 129	1792	...	A.S. XX, 132
1762	...	A.S. I, 135	1793	...	XVIII B.M. 681
1763	...	A.S. XI, 68	1794	...	A.S. I, 163
1764	...	XX A.S. X, 132	1795	...	XXIII P.L. 1012
1765	...	XII N.Bh.I, 39	1796	...	XXIII A.S. XVI, 62
1766	...	VI L.D. II, 1151	1797	...	A.S. VIII, 284
1767	...	B.M.	1798	...	R. 23
1768	...	IV.V L.D. II, 1006	1799	...	G.W.T. 42
1769	...	XXVI P.S. XXI 5	1800	...	XVIII SIN 184
1770	...	B.N. 113	1801	...	A.S. XVI, 177; XVIII, 247
1771	...	XIX Z.A.S. III, 29	1802	...	B.M. CONE
			1803	...	M.K. C. 20053
			1804	...	XII N.Bh.I, 124

F

"intendant of foreigners (*ooa*) that heaven creates on earth" (1803), and "intendant of all things given from heaven to foreign lands" (1804). The interpreters, *o*, who understood the foreign speech *āoo* or *ooa*, were under an intendant (1805-6-7); there were usually one or two *ou* in a Sinai expedition, and the form of the sign varies greatly (1808).

There remain over a hundred titles which are more or less uncertain, some quite unintelligible; these, with some which appeared too late to go in the series, are stated in Nos. 1809-1949. Where some likely connection, or general place,

1805 𐎔𐎕	B.M.	1835 𐎔𐎕𐎔𐎕	265 T. 1541	44 𐎔𐎕
1806 𐎔𐎕	V S.U. 1 120	1836 𐎔𐎕𐎔𐎕	265 M.M.D. 53	𐎔𐎕𐎔𐎕
1807 𐎔𐎕	VI A.S.XV, 4, 8	1837 𐎔𐎕𐎔𐎕	265 XXVI A.S.VIII, 65	𐎔𐎕𐎔𐎕
1808 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	SIN. 85-143	1838 𐎔𐎕𐎔𐎕𐎔𐎕	265 C. 20683	4𐎔𐎕
1809 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	45 A.S.V. 74	1839 𐎔𐎕𐎔𐎕𐎔𐎕	358 V B.N.	𐎔𐎕𐎔𐎕𐎔𐎕
1810 𐎔𐎕𐎔𐎕𐎔𐎕	51 A.S.VII, 191	1840 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	363 VI B.G.	𐎔𐎕𐎔𐎕
1811 𐎔𐎕𐎔𐎕	51 XXVI A.S.VIII, 278	1841 𐎔𐎕𐎔𐎕	363 M.M.D. 16	𐎔𐎕𐎔𐎕
1812 𐎔𐎕𐎔𐎕	51 A.S.X, III	1842 𐎔𐎕𐎔𐎕𐎔𐎕	363 M.M.D. 43	4𐎔𐎕𐎔𐎕
1813 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	59 XX A.S.XVIII 245-264	1843 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	375 MK SIN. 27	(𐎔𐎕𐎔𐎕)
1814 𐎔𐎕𐎔𐎕	59 M.M.D. 11	1844 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	375 VL L.D. II, 117	4𐎔𐎕
1815 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	59 V L.D. II, 53	1845 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	L.D. II, 43	𐎔𐎕𐎔𐎕𐎔𐎕
1816 𐎔𐎕𐎔𐎕𐎔𐎕	82 MK C. 20082	1846 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	SIN. 95	4𐎔𐎕𐎔𐎕
1817 𐎔𐎕𐎔𐎕𐎔𐎕	82 L. 825-7	1847 𐎔𐎕𐎔𐎕𐎔𐎕	375 MK. C. 20053	4𐎔𐎕𐎔𐎕
1818 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	82 XIX A.S.XI, 79	1848 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	375 XIX A.S.XI, 172	𐎔𐎕𐎔𐎕𐎔𐎕
1819 𐎔𐎕𐎔𐎕	114 A.S.VIII 226	1849 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	375 XVIII N.R.	𐎔𐎕𐎔𐎕𐎔𐎕
1820 𐎔𐎕𐎔𐎕𐎔𐎕	117 V B.N.	1850 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	(YEZIEH) XI L.D. II, 149	4𐎔𐎕𐎔𐎕𐎔𐎕
1821 𐎔𐎕𐎔𐎕𐎔𐎕	148 C. 20598	1851 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	M.M.D. 26	𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕
1822 𐎔𐎕𐎔𐎕	172 A.S.XVI, 228	1852 𐎔𐎕𐎔𐎕𐎔𐎕	L.N.	𐎔𐎕𐎔𐎕
1823 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	194 VI MEIR IV, XV	1853 𐎔𐎕𐎔𐎕𐎔𐎕	VI L.D. II, 117	𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕
1824 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	214 D.M. 532	1854 𐎔𐎕𐎔𐎕𐎔𐎕	IV L.D. II, 25	4𐎔𐎕
1825 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	214	1855 𐎔𐎕𐎔𐎕𐎔𐎕	L.N. 25	𐎔𐎕𐎔𐎕𐎔𐎕
1826 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	265 VI L.D. II, 117	1856 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	375 SIN. 115	𐎔𐎕𐎔𐎕𐎔𐎕
1827 𐎔𐎕𐎔𐎕𐎔𐎕	265 MK C. 20245	1857 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	400 P.B. L. 374	𐎔𐎕𐎔𐎕𐎔𐎕
1828 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	265 XXIX, A.S.XVIII, 45	1858 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	415 MK C. 20311	𐎔𐎕𐎔𐎕
1829 𐎔𐎕𐎔𐎕𐎔𐎕	265 V. 31	1859 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	500 M.M.D. 67	𐎔𐎕𐎔𐎕𐎔𐎕
1830 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	265 B.M. PENTAROTA	1860 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	508 VI A.S.XV, 220	𐎔𐎕𐎔𐎕𐎔𐎕
1831 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	265 M.K. C. 20735	1861 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	548 MK C. 20569	𐎔𐎕𐎔𐎕𐎔𐎕
1832 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	265 VI, A.S.XV, 210	1862 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	548 V 31	𐎔𐎕𐎔𐎕
1833 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	265 M.M.D. 7	1863 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	587 XIX B.M. 611	𐎔𐎕𐎔𐎕𐎔𐎕
1834 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	265 L.N. V. 10	1864 𐎔𐎕𐎔𐎕𐎔𐎕𐎔𐎕	587 A.S. VIII, 226	𐎔𐎕𐎔𐎕𐎔𐎕

is suggested, the position is given by a reference number following the title. Most of the words here are familiar in the previous titles, but some may be noted. 1829-30, the chamber *shespet*, was probably in the palace, as it had a keeper. 1834, *nu*, is probably *nuu*, a controller. 1835 seems to be the royal biographer. 1838 is a delicate phrase for the royal embalmer, "the intendant of embalmers of the double crown," *urti*. The secret service is in 1840, secretary of the secret notifications, 1841 secret orders, 1842 intendant of all secrets. 1843 is a traveller for some office. 1844 is probably *seuzet*, organiser. 1845 was "great in the

1865 𐎔𐎕𐎗	603 OK.P.38	𐎔𐎕𐎗	1908 𐎔𐎕𐎗𐎕𐎗	1751 C-20323	𐎔𐎕𐎗
1866 𐎔𐎕𐎗𐎕𐎗	613 S-U 11,170	𐎔𐎕𐎗𐎕𐎗	1909 𐎔𐎕𐎗𐎕𐎗	1751 F 2563	𐎔𐎕𐎗
1867 𐎔𐎕𐎗𐎕𐎗	680 B.A. 222	N.N.	1910 𐎔𐎕𐎗𐎕𐎗	1751 P.S. CONE 23	𐎔𐎕𐎗
1868 𐎔𐎕𐎗𐎕𐎗	682 IV.LD. 11.34.	𐎔𐎕𐎗𐎕𐎗	𐎔𐎕𐎗𐎕𐎗	1697 I.T.C. III 16	N.N.
1869 𐎔𐎕𐎗𐎕𐎗	762 M.M.D. 19	𐎔𐎕𐎗𐎕𐎗	𐎔𐎕𐎗𐎕𐎗	1698 M.M.A.3	𐎔𐎕𐎗𐎕𐎗
1870 𐎔𐎕𐎗𐎕𐎗	769 B.M. 754	𐎔𐎕𐎗𐎕𐎗	1911 𐎔𐎕𐎗𐎕𐎗	{R.T. II. XVI 116 T.C. III 10	𐎔𐎕𐎗𐎕𐎗
1871 𐎔𐎕𐎗𐎕𐎗	803 A.S. V. 122	𐎔𐎕𐎗𐎕𐎗	1912 𐎔𐎕𐎗𐎕𐎗	T.C. III, 12	𐎔𐎕𐎗𐎕𐎗
1872 𐎔𐎕𐎗𐎕𐎗	803, SU 114, PEPY II	𐎔𐎕𐎗𐎕𐎗	1913 𐎔𐎕𐎗𐎕𐎗	M.M.D. 38	𐎔𐎕𐎗𐎕𐎗
1873 𐎔𐎕𐎗𐎕𐎗	834 M.M.D. 43	𐎔𐎕𐎗𐎕𐎗	1914 𐎔𐎕𐎗𐎕𐎗	III B.M. 8	𐎔𐎕𐎗𐎕𐎗
1874 𐎔𐎕𐎗𐎕𐎗	834 M.M.D. 25	𐎔𐎕𐎗𐎕𐎗	1915 𐎔𐎕𐎗𐎕𐎗	IV M.M. B3	𐎔𐎕𐎗𐎕𐎗
1875 𐎔𐎕𐎗𐎕𐎗	837 XIX.LD. III 132 n	𐎔𐎕𐎗𐎕𐎗	1916 𐎔𐎕𐎗𐎕𐎗	M.M.A.3	𐎔𐎕𐎗𐎕𐎗
1876 𐎔𐎕𐎗𐎕𐎗	957 M.M.D. 19	𐎔𐎕𐎗𐎕𐎗	1917 𐎔𐎕𐎗𐎕𐎗	1878 1911 VI AS XV 215	𐎔𐎕𐎗𐎕𐎗
1877 𐎔𐎕𐎗𐎕𐎗	965 L.R. 104	𐎔𐎕𐎗𐎕𐎗	1918 𐎔𐎕𐎗𐎕𐎗	AS XV, 215; SU 1, 112	(B.M.) 𐎔𐎕𐎗𐎕𐎗
1878 𐎔𐎕𐎗𐎕𐎗	1023 IV.LD. II 8	𐎔𐎕𐎗𐎕𐎗	1919 𐎔𐎕𐎗𐎕𐎗	M.K.C. 20186	𐎔𐎕𐎗𐎕𐎗
1879 𐎔𐎕𐎗𐎕𐎗	1118 A.S. XVI, 259	𐎔𐎕𐎗𐎕𐎗	1920 𐎔𐎕𐎗𐎕𐎗	M.K.C. 20483	𐎔𐎕𐎗𐎕𐎗
1880 𐎔𐎕𐎗𐎕𐎗	1118	𐎔𐎕𐎗𐎕𐎗	1921 𐎔𐎕𐎗𐎕𐎗	M.M.D. 38	𐎔𐎕𐎗𐎕𐎗
1881 𐎔𐎕𐎗𐎕𐎗	L 63	𐎔𐎕𐎗𐎕𐎗	1922 𐎔𐎕𐎗𐎕𐎗	B.M.	𐎔𐎕𐎗𐎕𐎗
1882 𐎔𐎕𐎗𐎕𐎗	PS 74 to 354	𐎔𐎕𐎗𐎕𐎗	1923 𐎔𐎕𐎗𐎕𐎗	P.S. 83	𐎔𐎕𐎗𐎕𐎗
1883 𐎔𐎕𐎗𐎕𐎗	1118 P.S. 117	𐎔𐎕𐎗𐎕𐎗	1924 𐎔𐎕𐎗𐎕𐎗	P.S. 83	𐎔𐎕𐎗𐎕𐎗
1884 𐎔𐎕𐎗𐎕𐎗	1178 XII B.M. 305	𐎔𐎕𐎗𐎕𐎗	1925 𐎔𐎕𐎗𐎕𐎗	B.M. 301	𐎔𐎕𐎗𐎕𐎗
1885 𐎔𐎕𐎗𐎕𐎗	1178 XVIII P.S. 41	𐎔𐎕𐎗𐎕𐎗	1926 𐎔𐎕𐎗𐎕𐎗	C. L 547	𐎔𐎕𐎗𐎕𐎗
1886 𐎔𐎕𐎗𐎕𐎗	XVIII P.S. 42	𐎔𐎕𐎗𐎕𐎗	1927 𐎔𐎕𐎗𐎕𐎗	VI AS XII, 130	𐎔𐎕𐎗𐎕𐎗
1887 𐎔𐎕𐎗𐎕𐎗	1178 V. 71	𐎔𐎕𐎗𐎕𐎗	1928 𐎔𐎕𐎗𐎕𐎗	AS VII. 41	𐎔𐎕𐎗𐎕𐎗
1888 𐎔𐎕𐎗𐎕𐎗	1204 III SM.I; 𐎔𐎕𐎗𐎕𐎗	𐎔𐎕𐎗𐎕𐎗	1929 𐎔𐎕𐎗𐎕𐎗	IV M.M. C15	𐎔𐎕𐎗𐎕𐎗
1889 𐎔𐎕𐎗𐎕𐎗	1240 M.M.D. 47	𐎔𐎕𐎗𐎕𐎗	1930 𐎔𐎕𐎗𐎕𐎗	C 28006	𐎔𐎕𐎗𐎕𐎗
1890 𐎔𐎕𐎗𐎕𐎗	1252 M.M.D. 47	𐎔𐎕𐎗𐎕𐎗	1931 𐎔𐎕𐎗𐎕𐎗	(WOMEN) IV M.M. B3	𐎔𐎕𐎗𐎕𐎗
1891 𐎔𐎕𐎗𐎕𐎗	1276 IX.LD. II.98	𐎔𐎕𐎗𐎕𐎗	1932 𐎔𐎕𐎗𐎕𐎗	M.M.A.1	𐎔𐎕𐎗𐎕𐎗
1892 𐎔𐎕𐎗𐎕𐎗	1345 D.M. 533	𐎔𐎕𐎗𐎕𐎗	1933 𐎔𐎕𐎗𐎕𐎗	H.B. XXIII	𐎔𐎕𐎗𐎕𐎗
1893 𐎔𐎕𐎗𐎕𐎗	1389 XVIII L.R. 314	𐎔𐎕𐎗𐎕𐎗	1934 𐎔𐎕𐎗𐎕𐎗	MAF. I, 191	L 1356
1894 𐎔𐎕𐎗𐎕𐎗	XVIII A.S. XX, 7	𐎔𐎕𐎗𐎕𐎗	1935 𐎔𐎕𐎗𐎕𐎗		
1895 𐎔𐎕𐎗𐎕𐎗	1421 XVII.LD. III. 1-13	𐎔𐎕𐎗𐎕𐎗	1936 𐎔𐎕𐎗𐎕𐎗	PTOL. A.S. XX, 215-7	𐎔𐎕𐎗𐎕𐎗
1896 𐎔𐎕𐎗𐎕𐎗	1431 XVIII P.S. 30, 35	𐎔𐎕𐎗𐎕𐎗	1937 𐎔𐎕𐎗𐎕𐎗		
1897 𐎔𐎕𐎗𐎕𐎗	1431 P.S. 333	𐎔𐎕𐎗𐎕𐎗	1938 𐎔𐎕𐎗𐎕𐎗	B.M. OSIRIS	
1898 𐎔𐎕𐎗𐎕𐎗	1441 E.S. 795	𐎔𐎕𐎗𐎕𐎗	1939 𐎔𐎕𐎗𐎕𐎗	B.M. SARCOPH FRAG	
1899 𐎔𐎕𐎗𐎕𐎗	1511 VI.LD. II, 115 h	𐎔𐎕𐎗𐎕𐎗	1940 𐎔𐎕𐎗𐎕𐎗	USUAL	
1900 𐎔𐎕𐎗𐎕𐎗	1520	𐎔𐎕𐎗𐎕𐎗	1941 𐎔𐎕𐎗𐎕𐎗	B.A. 222	N.N.
1901 𐎔𐎕𐎗𐎕𐎗	1540 B.A. 254	N.N.	1942 𐎔𐎕𐎗𐎕𐎗	RO. B.A. 217	N.N.
1902 𐎔𐎕𐎗𐎕𐎗	1540 B.A. 252	= 1488	1943 𐎔𐎕𐎗𐎕𐎗	VAT. L. 713	𐎔𐎕𐎗𐎕𐎗
1903 𐎔𐎕𐎗𐎕𐎗	1680 C. 20630	𐎔𐎕𐎗𐎕𐎗	1944 𐎔𐎕𐎗𐎕𐎗	V. II	𐎔𐎕𐎗𐎕𐎗
1904 𐎔𐎕𐎗𐎕𐎗	C. 20630	𐎔𐎕𐎗𐎕𐎗	1945 𐎔𐎕𐎗𐎕𐎗	T. 1539	𐎔𐎕𐎗𐎕𐎗
1905 𐎔𐎕𐎗𐎕𐎗	1723 T	𐎔𐎕𐎗𐎕𐎗	1946 𐎔𐎕𐎗𐎕𐎗	M.K. C. 20075	𐎔𐎕𐎗𐎕𐎗
1906 𐎔𐎕𐎗𐎕𐎗	1730 R.C. CXXIII	𐎔𐎕𐎗𐎕𐎗	1947 𐎔𐎕𐎗𐎕𐎗	M.K. C. 20391	𐎔𐎕𐎗𐎕𐎗
1907 𐎔𐎕𐎗𐎕𐎗	1745 C. 20623	𐎔𐎕𐎗𐎕𐎗	1948 𐎔𐎕𐎗𐎕𐎗	AS VII. 51	𐎔𐎕𐎗𐎕𐎗
			1949 𐎔𐎕𐎗𐎕𐎗	NK Q 334	N.N.

diwan." 1848 was the intendant of the department of servants. In 1849 the intendants were all under control of the great vezier Rekhmara. 1857 suggests that the orderlies had a mess-table, as in No. 400. 1862, the careful sealer of the lofty works, may refer to vouching for the completion of buildings. The scribes of the king's travelling are named, 1863-4. 1867 was a high title, perhaps the registrar of tenancies in the land. 1868 shows the elders of the *hayt* court to be at least as early as Khufu. 1870 is an "active protector." From 1872, the "house of gold" seems to have been arranged for the *sed* festival.

1878 is the title of "protector." 1888 is the controller of agricultural land. 1879 is warden over the lake, the Fayum; and the roads (1880) which he was over would be the desert paths from the Nile to the lake; the family belonged to Deshasheh. 1891 seems to be the scribe of cut-grass fodder, "earth hair." 1901, the sailors of the nomes of the north land were looked on as the most able.

The gold-beaters are named in 1903-4. 1906 is the intendant of the weaving ground. 1907 seems to be a variant of the *shī*, mother-in-law, "of his father." (A.S. 1923 ? 613.) 1908 is a "familiar nurse," 1910 a tutor, "father nurse."

Passing to those for which no connection is known, the early lion seals 1697-8, 1911-12 are a peculiar class, sometimes with a borer (?) or yoke (?) on the back, or with a register roll. 1913, the double axe, is also on a crystal bowl of the 1st dynasty. 1967 may help to read the lion group above, "protector of the . . . children." The black vase, 1968, was a sacred vase, apparently, of which the controller is repeatedly named. 1920 seems like a granary for storing ears, *see* 564-5. 1940 is probably a variant for the inspector, *see* 1568-74. 1942 suggests a maker of baskets or mats for offerings.

In most cases it is only by comparison of various titles which include one particular element, that we can gradually delimit the meaning of the different offices and services. The present list is only a beginning, which may serve as a stock of comparisons to be gradually amended and made more precise by adding new examples of titles. Such a list—however imperfect—is essential for a working basis, and I much hope that corrections and additions will be sent in, which may from time to time be published, to define further the many employments of Egyptian life.

FLINDERS PETRIE.

A FRAGMENT OF A CROWN OF OSIRIS FROM THE SOUTH OF RUSSIA.

AMONG other objects found in the Sloboda Nedvigovka (ancient Tanais), near the mouth of the Don, there is a fragment of bronze. The exact place and circumstances of the finding of that object are not known. In the catalogue of the Russian Historical Museum of 1893 this fragment is wrongly described as "a massive bronze ornament of a Scythian type in the shape of a banner, covered with a geometrical pattern. The top of the object is ornamented with a vitreous paste—yellow, red and green in colour." But in fact, the described object is a bronze flat piece (5 inches high, 3 inches wide, $\frac{1}{8}$ inch thick) broken at the top; on its left side we see two tenons; on the right a uraeus facing, with a solar disc on its head; the front of the body of the uraeus is ornamented with enamel inlaid in six cavities. The two upper cavities are filled with yellowish-green enamel; the remnants of brick-red enamel are in the two middle cavities; the enamel in the two lower cavities is lacking. The tail of the uraeus is interlaced with the horn of a ram. On its left side the tail is broken. Beneath the object we find an eye (for a hook?). The back of the flat piece is not ornamented. The front side is covered with an engraved



design having the appearance of feathery lines. We may suppose that our fragment is the part of a feather crown and was to be put on a figure of Osiris. Similar crowns are in the *Catalogue Générale du Musée du Caire*, Vol. I, Pls. XVI, XVIII; CHAMPOLLION, *Monuments*, etc., T. II, Pl. CXXXIX bis, 3.

At any rate the fragment awakens great interest, as it is unique coming from the South of Russia.

Thanks are due to the Administration of the Russian Historical Museum at Moscow for the kind permission to publish this object, and also to Prof. W. W. Struve of Leningrad.

PROF. A. ZAKHAROV.

NOUVEAUX FRAGMENTS DE LA STÈLE DE PIANKHI.

J'AVAIS à peine complété ma traduction du texte de la stèle célèbre de Piankhi, roi d'Éthiopie et d'Égypte (XXIV dyn.), et mis en parallèle ce texte avec différentes copies faites de ce texte par Mariette, de Rougé, Schaefer, et la critique du texte de ce dernier par Anderson, quand j'ai reçu 5 fragments de cette même stèle trouvés par le Prof. Reisner à Gebel Barkal, au même emplacement où fut trouvée la stèle en 1862.

Cette opportunité m'inspira l'idée d'entreprendre la mise en place de ces fragments sur le grand bloc de la stèle, et j'ose espérer avoir réussi dans mon entreprise. Maintenant j'ai remis les fragments à leurs places sur la stèle.

Dans mon travail je me suis basé (1) sur la forme des fragments et (2) sur le sens de leurs textes. Ayant eu, dès le début, des doutes sur les rapports du 5^{ème} fragment (No. 45085) avec la stèle, j'ai dû pour ce dernier fragment recourir à l'examen de la matière de la pierre.

A.—*Le Fragment No. 47086.*

D'après la forme :

D'après l'inclinaison de la ligne verticale AB bornant les inscriptions j'ai tiré la conclusion que ce fragment doit être placé entre les lignes 80 et 87 du revers de la stèle.

D'après le sens :

Par le sens j'ai pu préciser sa position sur les lignes 82, 83, 84 et 85 la correspondance du sens de leurs textes avec celui des lignes correspondantes de la stèle étant parfaite.

Les lignes 82-85 ayant été placées à leurs places, l'autre surface (courbée) inscrite du fragment se posera nécessairement sur les lignes 41, 42, 43, 44 et 45 du côté gauche de la stèle.

Fin de 81	<i>reçurent.</i>	82	<i>ils</i>
„ 82	<i>Entra Sa Majesté dans l'intérieur</i>		
	<i>de cette ville il</i>	83	<i>offrit une offrande.</i>
„ 83	<i>Ils se posèrent sur leur ventres</i>	84	<i>devant</i>
„ 84	<i>magasins pour le domaine sacré</i>	85	<i>de son père Amen Ra.</i>

Le complément de la stèle par les lignes 41-45 du fragment est visible sur le tableau E qui suit.

B.—Le Fragment No. 47087.

D'après la forme :

La surface inscrite de ce fragment étant courbée, il ne peut être placé que sur le côté gauche de la stèle et entre les lignes 35–50.

D'après le sens :

Par le sens j'ai pu préciser la position de ce fragment sur les lignes 41, 42, 43, le texte de chaque ligne du fragment étant complété par le texte de la ligne correspondante de la stèle.

Le texte de ces lignes est la suite de la prière de la reine Nestentmehnut aux épouses et aux soeurs du roi Piankhi (v. la ligne 34) afin qu'il fasse grâce au Roi Nemarod. Par le texte du fragment et de la stèle, on voit que les épouses et les soeurs royales se prosternent devant le roi Piankhi (ligne 42), et que les épouses royales implorent la grâce du Nemarod, roi Het-Urt (ligne 43). Le fragment No. 47087 posé à la place que je propose, s'adapte exactement sur la cavité correspondante de la stèle.

C.—Le Fragment No. 47088.

D'après la forme :

D'après la forme du fragment j'ai tiré la conclusion qu'il doit appartenir au revers de la stèle étant donné que la mesure de l'angle formé par les deux surfaces inscrites mesure 100° et que les angles formés par le devant de la stèle et les surfaces latérales ne dépassent nulle part les 92°.

Pour préciser la position de ce fragment sur le revers de la stèle j'ai mesuré la grandeur des angles sur toute la hauteur de la stèle. Auprès des lignes 85 ∨ 45 l'ouverture de l'angle est de 101°, auprès des lignes 91 ∨ 50 elle est de 97°, et auprès des lignes 98 ∨ 51 elle est de 92°. Il est donc clair que notre fragment ne peut être placé qu'auprès des lignes 85 ∨ 45 et 91 ∨ 50.

En étudiant la largeur de la bande formée par l'arrête de l'angle et la ligne verticale, bornant les inscriptions, j'ai tiré la conclusion qu'il faut placer le fragment No. 47088 auprès de la ligne 87 parceque sa largeur sur la stèle auprès de cette ligne est de 19 mm. et sur le fragment de 20 mm., tandis qu'auprès de la ligne 98 elle est de 27 mm.

La ligne 87 ayant été placée à sa place, l'autre surface inscrite du fragment se posera nécessairement sur les lignes 46 et 47.

D.—Le Fragment No. 47089.

Fin de 8	<i>ils assiègent contre elle,</i>	9	<i>qu'ils prennent ses hommes.</i>
„ 9	<i>N'entrez pas pendant</i>	10	<i>la nuit.</i>

D'après le sens :

La traduction du texte du fragment et de la stèle donnée ici-haut prouve que le sens du texte du fragment complète celui de la stèle.

D'après la forme :

Ce fragment entre de lui-même dans sa position exacte 49, 50, 51—8, 9, 10 sa forme correspondant exactement à la cavité de sa place sur la stèle. En outre la partie d'une lettre hiéroglyphique manquant sur le fragment à la ligne 51 se complète sur la stèle à la ligne 51 après la mise en place du fragment.

Le tableau E ci-bas représente les quatre fragments disposés à leurs places respectives sur le côté gauche de la stèle.

Cette disposition nous donne clairement le sens du texte de la grande cavité entre les lignes 35-51.

Par les lignes 35-40 la reine Nestentmehnut achève son discours et les épouses et les soeurs royales commencent à implorer le roi Piankhi afin qu'il fasse grâce au roi Nemarod, souverain de Het-Urt, en se mettant sur leurs ventres devant lui (ligne 42).

Dans la suite vient Nemarod (ligne 43), il s'approche du trône de Sa Majesté (ligne 50) et commence son discours (ligne 51).

F.—*Le Fragment No. 47085.*

Le texte du fragment No. 47085 contenant un cartouche du roi Piankhi (sur la ligne 2 du fragment) et la date d'un événement (sur la ligne 3 du fragment) nous inspire un intérêt particulier.

D'après la forme du fragment :

Le fragment No. 47085 a la surface inscrite plate, il pourrait donc être placé quelque part sur le revers de la stèle, entre les lignes 78-96 ou sur le côté gauche, entre les lignes 43-51, où la surface est plate. Sur le côté gauche il n'y a pas suffisamment de place, le fragment étant plus grand que la cavité existente.

Examinons maintenant où on pourrait placer le fragment sur le revers de la stèle. En le plaçant successivement sur toutes les lignes du revers de la stèle où il y a des cavités, nous voyons que le fragment avec son coin pointu sort partout des limites de la ligne bornant le texte de la stèle de 1,5 cm. minimum. La largeur des deux bandes inscrites du fragment ensemble est de 6,8 cm., tandis que la largeur pareille sur le revers de la stèle n'a nulle part moins de 7,5 cm.

D'après le sens :

La ligne 1 du fragment No. 47085 parle de l'offrande au dieu Ammon.

La ligne 2 parle de quelque chose qui appartient à Piankhi, existant d'Atoum.

La ligne 3 parle d'un certain événement au mois 1^{er} de Shemouit le jour 4, en présence du grand prêtre d'Ammon.

Ces textes ne correspondent nullement au texte contenu sur le revers de la stèle auprès des cavités existentes.

Ayant finalement examiné la composition du granit gris de la stèle et celle du fragment No. 47085, nous avons trouvé que les petites taches de quartz et mica du fragment ont le coloris rose, tandis que celles de la stèle sont de couleur de cannelle claire et foncée.

Par les considérations ci-haut je conclus que le fragment No. 47085 appartient à une autre stèle peut-être non encore découverte et appartenant toujours au roi Piankhi puisque son cartouche s'y trouve.

La forme de l'écriture et la largeur des lignes du fragment No. 47085 sont presque identiques à celles du fragment du Musée de Berlin, que Lepsius a trouvé à Gebel Barkal pendant son voyage en Nubie, estampage duquel j'ai reçu du Prof. Schaefer de Berlin. Cette coïncidence me fait penser qu'il devait exister une autre stèle Piankhi, peut-être symétrique à celle que nous possédons déjà. Je serais très heureux si mon hypothèse pourrait servir de stimulus à la découverte d'une page inconnue des archives de l'Ancienne Égypte.

L'été de 1924 j'ai visité M. le Prof. Reisner, qui après avoir connu mon travail m'a dit que ses conclusions coïncident exactement avec les miennes. Prof. Reisner a aussi ajouté que pendant son dernier voyage à Gebel Barkal en Nubie, il avait trouvé encore quelques petits fragments du texte hiéroglyphique en basalte noir.

GR. LOUKIANOFF.

REVIEWS.

Le Nil et la civilisation Égyptienne. By A. MORET. 8vo. 573 pp., 12 pls., 77 figs. 1926. (*La Renaissance du Livre.*) 25 frs.

The series of the "Evolution of Humanity" continues, and is issued in French at less than a quarter of the price charged for the English edition. This volume is of far sounder work than the others which we have noted before. The treatment throughout is consistent, and includes many translations of important texts, so that the Egyptian mind speaks for itself. Naturally the author has mainly dwelt on the religion and social conditions, while the physical abilities and knowledge do not occupy a tenth of the space. This gives a view out of proportion to the actual life, and still more so to the remains that are so striking. It only represents one side of the title of "Egyptian civilisation," and has nothing about the physiography of the Nile which heads the title.

The difference of feeling between the Old and Middle Kingdoms is well brought forward; but the rise of Osiris to importance is part of the Herakleopolitan rejection of the dominance of Ra, more racial than democratic. A few points may be reconsidered. Page 6, the corruption of the Greek lists of kings, is much the same as that of the various lists of the Ptolemies; it is general to late Greek writers, and not special to the early history. Page 134, on the slate it is the tribes, rather than the king, shewn as taking the fortresses. Page 403, the Greeks were in Naukratis more than a century before Amasis, and the trader preceded the soldier in Egypt. Page 404 assumes a great increase of private documents under the Bubastites, but the Kahun papyri shew that private wills and settlements were in full use in the Middle Kingdom. Page 510, the bracelet is of solid forms, and not open outlines like the *sa* sign. Page 843, note the abundance of Mousterian and mesolithic flint-work in Egypt. This book is altogether a valuable account for general reading, within the scope which it covers.

L'Art de la Navigation en Égypte jusqu'à la fin de l'ancien empire. By CHARLES BOREUX. 4to. 328 pp., 2 pls. 1925. (Cairo, Institut Français d'Archéologie orientale.) 225 P.T.

This volume completes the work already noticed in this Journal (1925, p. 91), down to the end of the Old Kingdom. It deals with all the questions of shipping with great fullness of detail, and is abundantly illustrated with nearly two hundred figures in the text; a useful feature is the repetition of blocks as often as there is reference to them, so as to avoid looking back. A complete corpus of information is here provided, with discussion of previous works where there are different views to be considered, and this will long be the definitive work of reference on the subject.

Throughout there are many valuable remarks and considerations of details. The absence of ribs to vessels, and building entirely by edge-dowelling of timbers, is supposed only to belong to the lesser vessels, and on the Dahshur boats or those seen by Herodotos. Ribs seem to be essential for large ships, and two words are supposed by their determinatives, and their number in a ship, to be the needful ribs. These are *ugātu* and *mes-seṛt*; may we suggest that these refer to comparing the pair of ribs across a boat to a "jaw," or regarding ribs as "forming the wall" of the side? The earlier vessels are propelled by rounded fiddle-shaped paddles, which were succeeded in the Vth dynasty by long pointed oars. The single mast of the prehistoric boat was followed by the forked mast resting each leg of it on the side of the boat, and the single mast returned to use at the close of the Vth dynasty. The purpose of the forked mast may perhaps have been to distribute the weight on the edges, and prevent the strain on the floor of the boat, as there was but a slight keel, if any. The difficulty about the stability of vessels with so little hold on the water is considered to have been avoided by having a very wide beam, even equal to half the length. This was not objectionable in Egypt, as a ship travelled by floating down the stream half the time and then benefited by friction. The use of weather-boards above the gunwale proper, to keep out waves, is pointed out in representations of lashing below the edge; these boards are general on cargo boats on the Nile now, plastered up with mud. Such are some of the many points of interest here.

A matter which might be amplified is the nature of the steering oar. It seems to be here accepted, as usual, that it moved like a rudder. It has, however, a cross-arm projecting from it, and in models it is shown as resting on the stern and on the top of a high post, thus fixing its axis in position. The cross-arm can, then, only have been used to rotate it on its axis. The same form of steering is seen now in the boats on Lake Como; the big steering oar there rotates in fixed supports, and is moved by two ropes turned in opposite directions around it. This explains why in Egyptian figures there is sometimes rope in place of a cross-arm.

Another subject to be cleared up is the presence of a stout twisted cordage from end to end of a vessel, raised by supports in the middle. The explanation of Erman is accepted for this in smaller vessels, that it was twisted to draw up the ends of the vessel and give it a curve. This is quite impossible, as any bending of a wooden vessel, or even of a papyrus boat, would force every joint open. The only sense of it must be the same as in the large ships, to prevent the vessel breaking its back, especially in regard to the long projection of the ends above the water-line. Why should it, then, be represented as being twisted during the boat-building? Doubtless formerly, as now, boats were supported all along by props during building and, when floated mainly on the middle, the strains would be different. Thus to save this change the long tie was put in and strained until it just took up the weight of the ends off the props; then the boat could be floated off by the high Nile safely and caulked where needed.




On p. 504 the difference is not observed between a ruling conquest which does not alter the civilisation and a tribal conquest which changes the people. The Persian conquest of the XXVIIth dynasty was ruling, but did not alter the customs or products. So the Amorite conquest of the VIIth-VIIIth dynasties ruled, but did not bring in a dominant civilisation. The seal of King Khondy is conclusive as to his being a Syrian. The work has abundant indices of words, hieroglyphs, references to figures, and to other works. Its complete apparatus is worthy of such a permanent treatise, which is to be heartily welcomed.

L'Art Égyptien. By CHARLES BOREUX. Sq. 8vo. 68 pp., 64 pls. 1926. (Van Oest, Paris and Bruxelles.) 30 frs.

After the excellent study of Egyptian ships by M. Boreux, we might hope for fresh research when he deals with the art; but he is content in this book to write for the public, which does not yet know the familiar masterpieces here figured and compared. No doubt it is the demands of a publisher for a popular series which has thus limited his scope. The account of the various branches of art is pleasant and correct, with far more artistic insight than Maspero had, but without much fresh analysis. The best part is the half-dozen pages given to Amarniote work. That the true Egyptian line of growth ended with the XIIth dynasty, and that the XVIIIth dynasty was a product of foreign influences, is well perceived; "the close relations which the Egyptians continually held with the other peoples of the Mediterranean—Hittites, Cretans and Mykenaeans—while it considerably widened their view, had also awaked in them the complex feelings which one always sees grow in an age of refined culture, the most usual being a wide curiosity, with a lively taste for what we now call psychological analysis." He adds that the art of Amarna was introspective, very different from the realism of the Old Kingdom, and sought to represent the mental aspect. All this is an advance on what has generally been said on this period by its admirers or detractors. It makes us wish that the author would take an opportunity of writing fully on all the periods, and deal with many important things which do not appear here—the prehistoric art, the great novelty of the work of Zeser, the Lahun pectorals, the Petosiris sculptures.

From another point of view it is regrettable that only two plates appear here which are not too familiar. This is another publisher's album, of which we have had five already, and are promised yet a seventh, all repeating stock subjects. Too much must not be expected of the quality of 64 plates for 3s. 6d., but the process gives a woolly surface running into black and white, without as much detail as a good net block.

La Croix ansée des anciens Égyptiens. PIERRE MONTET. (*Revue Archéologique*, 1925.)

Montet considers the true nature of the , the sign of life, to be an ornament in the form of a necktie tied in a bow, which may be worn as necktie, sash or diadem. The upper loop represents the part that goes round the neck, waist or head, the side pieces are the two loops, and the lower part represents the loose ends. Round the necks of three ivory lionesses (playing-pieces for the game of *mhn*)—found by him in 1913 in an unpublished tomb near Abu Roash, of the time of King Den—were collars tied in front in a bow with two side loops and two loose ends. Montet derives the counterpoise of later necklaces from this Ist dynasty necktie, the ends being joined at the base to allow for a decorative filling. The name of the counterpoise is, of course, *m'nh.t*, which may be spelt with the  sign. In the Louvre mastaba the word occurs without the initial *m*. The name of the necktie-like ornament must, he concludes, have been *'nh*, from which were formed *'nh.t* and *m'nh.t*, the names for the ornament derived from the primitive .

Alter und Herkunft der ägyptischen "Löwenjagd-Palette." HERMANN RANKE. (*Sitzungsberichte der Heidelberger Akademie der Wissenschaften, phil.-hist. Klasse, 1924-25. 5 Abhandlung.*)

The writer considers the lion-hunt palette to be a product of Lower Egypt, dating to a period before the union under Menes. This theory would explain the discrepancy between the general design, and the lack of differentiation of the principal figures on the one hand and the presence of the two hieroglyphic signs on the other, and would also account for the dress and appearance of the hunters and for the double axe. According to Ranke, the scene represents and commemorates a great and united sally against wild beasts on the part of warriors from the western and eastern realms, who are shown bearing their respective standards.

L. B. E.

Excavations at Carthage, 1925. By FRANCIS W. KELSEY. 8vo. 51 pp., 6 pls., 24 figs. 1926. (Macmillan.)

This is called a preliminary report, but gives an excellent general view of the whole work, with valuable details of antiquities and inscriptions. In the cemetery the three layers of Punic remains are distinguished; at the bottom are vases, surrounded by stone cairns, and partly sunk into the rock, containing charred bones of children, reckoned to date from the founding of Carthage; above that, a later level of vase deposits, without cairns, placed in groups with a dedicatory stone over each group. Lastly, these were earthed over about the end of the IVth century B.C., and the latest layer of vases was deposited. The inscriptions are dedications to the goddess Tanit and to Baal-Hammon. It is suggested that this goddess is the Libyan Neit, with the feminine prefix T, like the Egyptian article *ta*. The regular emblem of the goddess is like the *onkh* sign with the stem widened out below. This form is found on several steles of the Ist dynasty (*Royal Tombs*, I, xxxi, pp. 11, 12, 38; II, xxvi, p. 52). It is not due to a corruption of the *onkh*, but is the primitive form which continued in use in Libya. The site of Carthage has been shamefully neglected by the French authorities; the site is all cut up in building lots, much now built over during recent years; the cemetery and steles, found accidentally, were left to be ruined. At last, American archaeologists stepped in, and with a staff of ten Americans and four French the salving of the site has been systematically undertaken, while part can still be examined. Prof. Kelsey is to be congratulated on his valuable work, which will do much to materialise the history of Carthage.

A Waxed Tablet of the Year 128 A.D. By Professor F. W. KELSEY. 9 pp., 4 pls. (*Trans. American Philological Association, 1923.*)

This paper describes a complete official copy of the birth register of a girl, Herennia Gemella. It is entirely in Latin, written on wax on the interior of a pair of wooden tablets; a complete duplicate is written on the bare wood outside. Thus it could be easily consulted, with the reserve of the wax copy inside in case of damage.

The Rise of the Imams of Sanaa. By A. S. TRITTON. 8vo. 141 pp. 1925. (Milford). 7s. 6d.

This is not Egyptian, and scarcely ancient history, so we can only refer to it here. It deals with a rising against the Turkish government in the region north of Aden in A.D. 1597 till 1628. A chapter at the end deals with the incidents concerning religious and social life.

Psalterii Versio Memphitica. Réédition par O. H. E. BURMESTER et EUGÈNE DÉVAUD, pp. ix-180. (Istas, Louvain.)

This is the first volume of a series of re-editions of Bohairic texts of the Old Testament, which are now practically inaccessible owing to their being out of print. The editors propose that each text shall be exactly copied from the oldest known manuscripts, even with the original errors (these, however, will be noted, as also any peculiarities of writing), with the double division into chapters and verses, and also into folios, pages and lines. Each volume will also contain all the variants from all known manuscripts as far as possible. It is a colossal task, but the names of the editors are a guarantee that the work will be done with the utmost care and accuracy. Therefore to all students of Coptic and to all students of the Bible, this volume and those which follow will be absolutely indispensable. A critical edition of a series of texts will inevitably give a great impulse to scholarship, and the editors will earn the gratitude of the present and all future generations of scholars.

M. A. M.

The Phonetics of Arabic. By W. H. T. GAIRDNER. Sm. 8vo. 107 pp. (Oxford University Press.) 7s.

Canon Gairdner has broken entirely new ground in this little book on the phonetics of Arabic, and by his knowledge of the language, both classical and colloquial, he has produced an extremely valuable help to all Europeans visiting or living in Egypt. In all spoken languages the learner must have oral teaching, but though the teacher knows how a word should sound when rightly pronounced, he has very often no idea how the sound is produced; the learner is usually equally ignorant, with the result that he may learn to read but very seldom learns to pronounce correctly in speaking. Arabic is entirely different from European languages, but to an untrained ear there often appears no distinction between consonants which to the accustomed ear are vividly distinct. With this book to explain the methods by which Arabic sounds are produced and with a teacher to superintend the production of those sounds, a beginner will rapidly learn to pronounce correctly and to speak with the proper accent and intonation. Canon Gairdner is to be congratulated on a very useful and practical book.

M. A. M.

Orientalische Mystrienkulte im römischen Rheinlande. By H. LEHNER. (*Bonner Jahrbücher*, Vol. 129, 1924, pp. 36-91.)

This is the best and most recent treatise on foreign cults in the Roman provinces Germania Superior, Germania Inferior, and Belgica. The author assembles and tabulates the available material and draws the following conclusions. A fairly wide spread of Oriental cults is revealed, not only in military circles such as frontier garrisons, but likewise far into the Celtic hinterland. Oriental religious ideas were common property in the Rhineland in the IInd and IIIrd centuries to a far greater extent than has been supposed hitherto. Tomb carving and offerings were strongly influenced by these mystery cults in middle and late Imperial times, and the change from cremation to inhumation, which took place in the middle of the IIIrd century, was probably due to them and not, as is generally supposed, to Christianity. The Army was responsible for the introduction and diffusion of Eastern ideas to a superficial and partial extent

only, as is evident from the difference in date between the occupation by Oriental auxiliaries and the civilian records. The former mostly belong to the Ist and IInd centuries, whilst the civilian records are, on the whole, later. For Isis, Serapis and the Great Mother, the Army as such cared little or nothing, and these cults in particular are fairly widespread. Military influence need only be taken into account in the case of Mithraism. Nor do the inscriptions reveal a strong civilian strain of merchants, craftsmen and slaves, and Syria, in particular, had the least influence in the hinterland, where this element was strongest. The firm hold on the civilian population of Oriental religious ideas must, therefore, have been due to the teaching and influence of the priesthoods, of whom there is some inscriptional record (as, for instance, the *tabella ansata* dedicated to Isis by a priest, which is published for the first time in this volume).

L. B. ELLIS.

NOTES AND NEWS.

THE continuity of the civilisation of Egypt has now been completely traced in recent years, from the Badarian period onward. The British School in Egypt therefore, in the coming season, will proceed with the collateral search on the Egyptian remains in the South of Palestine—Egypt over the border. This is in accordance with the constitution of the School, which was founded to work in any country that has been subject to Egypt, and so to deal with all branches of the Egyptian civilisation. Such research has been cordially accepted by the authorities and the other representatives of British excavation in Palestine. The Director will be accompanied by Lady Petrie, with Mr. and Mrs. Starkey, and two fresh students—Mr. Risdon and Mr. Harding. Dr. Parker of Cambridge will take part in the work, and Miss Murray may join later. In the spring the Japanese archaeologists, Professor Hamada and Mr. Umehara, are expected to arrive. The outcome of searching a district of such historic importance cannot be seen in advance ; but among the possible openings are the Badarian settlements, the Hyksos occupation, the temple of the Syrian goddess, and the many movements of invaders who have crossed the ground from either side.

Mr. Quibell, now retired from the Cairo Museum, is going out to carry on the government excavations at the Step Pyramid of Saqqarah.

Mr. Frankfort will continue the work of the Egypt Exploration Society at Amarna and Abydos.

Mr. Mackay has been engaged by the Archaeological Survey of India to work on the earliest civilisation found in that land, in the Indus Valley. It is very desirable that an excavator familiar with the buildings and objects of Sumerian age should interpret the Indian remains, which are of similar character.

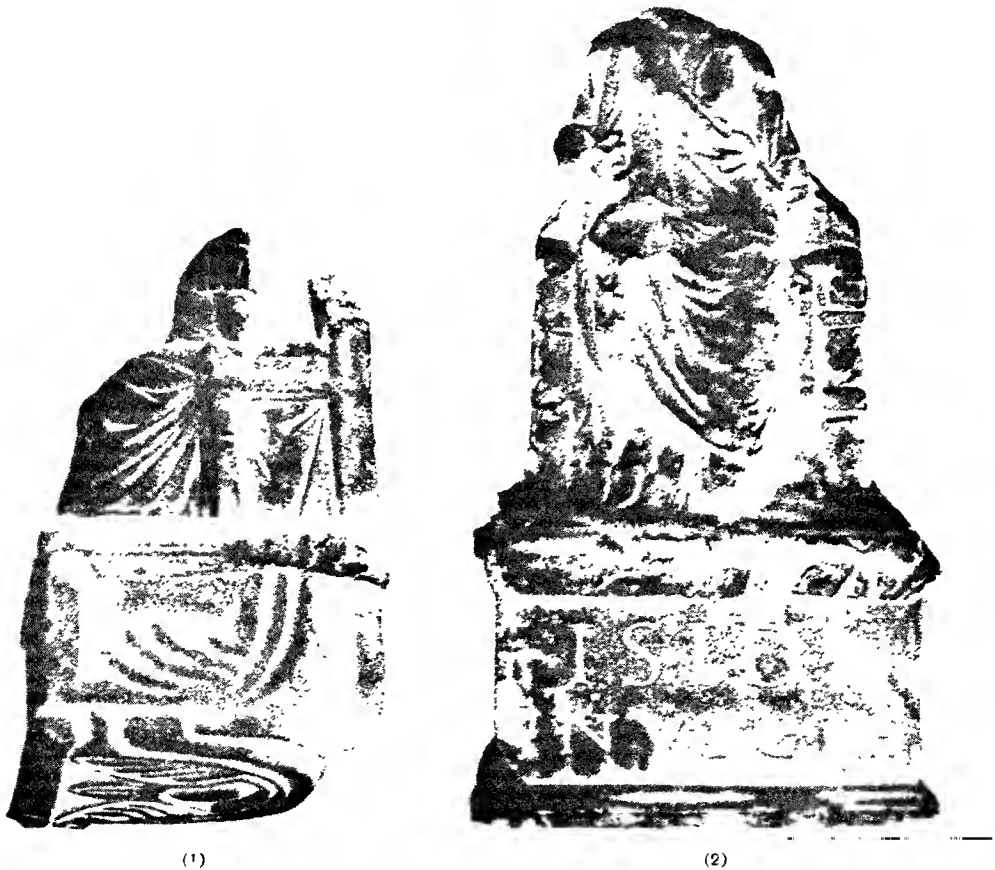
It will be remembered how the work of the British School in 1924 at Qau led to a series of connections of the IXth to XIIth dynasty. The tombs like Nubian temples were made by the IXth-dynasty princes Uahka ; the son of the great Uahka was Senusert ; the Senuserts of the XIIth dynasty were like the black granite sphinxes ; these were also like the modern Gallas. Now the chain is linked up by the heathen Gallas having their high God named Wák'a. The family name of Uahka is thus the Egyptian accommodation of the theophoric name of the Galla princes of the IXth dynasty. Wák'a is the word for " sky " or " sun," and so used for the heavenly god. This is described in an article by Maria v. Tilling of Hamburg in *Orient. Lit. Zeitung*, October, 1926 ; in the same article is named the great goddess 'Atetê, which suggests an earlier Galla connection with the name Ateta, familiar in the Old Kingdom.

The catalogue of *Glass Stamps and Weights* is now ready, and copies can be ordered from the Secretary of the British School, University College, W.C. 1.

ANCIENT EGYPT.

ISIS AT COLOGNE AND AIX.

ONE of the most interesting relics of the Roman occupation of Cologne may still be seen almost where it was found, as it has not been removed to a collection of Rhineland antiquities. Exhibited in the triforium of the Church of St. Ursula is a Roman statue of Isis, which was discovered in the north wall of the nave in 1882. The find was discussed in *Bonner Jahrbuch*, LXXVI, 1883, from which



(1) (2)
FIGS. 1 AND 2.—FIGURE OF ISIS. CHURCH OF ST. URSULA, COLOGNE.
(1) FORESHORTENED TO SHOW FACE OF LATER CAPITAL BELOW.

the accompanying illustrations are taken (Figs. 1 and 2). The following details, however, may be of interest, as the statue and its whereabouts do not appear to be widely known.

On removing some superfluous arched ribs from the north wall of the nave, it was found that one pillar projected further into the wall than its neighbours, the reason being that the front of its capital had been carved out of the under surface of the plinth of a statue (Fig. 1), the statue itself having been completely

immured. The find was replaced by a new capital, and statue and plinth are now exhibited in the church. The material is Jura limestone. The measurements are 51·8 cm. (about 20½ inches) including base, the base itself measuring 27·5 cm. square and 18·2 cm. in height. The figure is seated; head and arms are missing, and none of the characteristic attributes of Isis are present; indeed, without the inscription, *ISIDI INVICTE*, the identity of the statue would be in doubt. The style and execution of the carving, and the excellence of the lettering, indicate the 1st century of our era, not later than Hadrian. *Invicta* is the vernacular form of *invictae*, an epithet which occurs so frequently on Mithraic monuments in the combination *Soli* (or *Deo*) *invicto*. This epithet is also applied to Isis on a fragment of a votive stone which was found in Cologne in 1888.

Full details of the statue are shown in Fig. 2. A peplos reaches to the feet, and over it a pallium hangs from the shoulder in many folds. One end of the pallium is tucked in against the arm under the left breast, and is lightly knotted, whilst the other end is wrapped round the right side of the pallium, which hangs down the back from the right shoulder. On the right side of the statue 9 cm. of the under garment are visible, and 3 cm. only on the left side, where the dress is divided into regular folds. The upper arms are clad in wide sleeves. The right forearm was lifted higher than the left, and on the right shoulder is a little swelling which may represent the end of a curl. The right foot is somewhat drawn back. The edge of the outer garment is much damaged, and it is impossible to ascertain if it was fringed or not. (According to Winckelmann, a pallium fastened under the breast is a constant characteristic of Greek representations of Isis, and it is nearly always fringed.)

It is highly probable that this statue was a cult image of a temple of Isis which once stood upon the site of the present church. No inscription has been found definitely mentioning such a temple, like one found near Zurich, which records the erection by a man, at his cost, of a temple to Isis for the community, his wife and daughter contributing a considerable sum to its embellishment. Quite recently, however, a small bronze *tabula ansata*, measuring 6·6 cm. by 2·5 cm., was brought to light in a private collection which had been formed largely in Cologne; this tablet is dedicated to *Isidi augu (stae)* by a priest.¹ In conjunction with earlier finds, which include a jar with *Isidi* scratched on it, this tablet is strong confirmation of the official worship of Isis in Cologne.

Egyptian antiquities purporting to have been found in the Rhineland are usually regarded with suspicion in the first instance. The patriotic eagerness shown by collectors to possess objects found locally is a temptation to dealers to falsify particulars; to this was added the desire for archaeological proof of the presence in the Rhineland of the martyrs of the Theban Legion, in whose honour many Rhenish churches are dedicated. It would, however, be strange if there were no trace of the worship of Isis in this district, since those emperors who favoured her cult were there repeatedly during their campaigns. A votive stone to Sol Serapis, set up by a woman of Cologne, speaks for itself. Of great importance also, being dated, is an altar dedicated to *I.O.M. et Serapi et Genio Loci* by a beneficiary in the year 179. In Germania Inferior the worship of Isis is confined almost entirely to Cologne, and in view of the comparative rarity of the finds, the cult cannot have been so widely spread as that of other female divinities (mother goddesses, etc.). In Germania Superior was the temple of Isis

¹ *E.J.*, CXXIX, 1924, p. 48, Fig. 1 and pp. 263-4.

near Zurich, mentioned above. Literary evidence of the worship of Egyptian gods in this province is given by Ammianus Marcellinus (XVI, 12, 25), who mentions, in connection with the battle of Strasburg in 357, a chief of the Alemanni, who had been initiated into the "Greek mysteries" and had renamed his son Serapio. As regards the Belgian province a statue of native limestone, measuring 1.65 m. in height, including base, was found at Metz in 1841, and is now in the museum there.¹ It is of rough workmanship, but evidently copied from a good model (see Fig. 3). Though the figure is uninscribed and headless, and without any of the usual attributes of the goddess, the dress is fastened at the breast by means of a knotted tie, and the statue has been recognised as Isis by Espérandieu and others. If this identification is correct, a temple of the goddess is indicated at this place also.

Tacitus (*Hist.*, V, 1) states that Titus united the XIIIth Legion (which he levied in Syria) with the XXIInd and IIIrd (which he raised in Egypt), and the XXIInd has left its records between Strasburg, Mayence and Wiesbaden, and still lower down the Rhine. The inscription of Horus Pabeci filius, who served in the Roman fleet, vouches for the presence of at least one Egyptian in Cologne. The monuments, in fact, reveal a highly coloured racial picture for the Army of Occupation, and there were "black troops" on the Rhine in Roman days.

Whether or not there was a temple of Isis on the site of the present building, the church of St. Ursula has a long history behind it, which faithfully registers the chequered fortunes of Cologne. In any case the deliberate preservation of a heathen image, such as Fig. 2, is remarkable—a striking observance of the indulgence preached by St. Augustine in regard to heathen worship: "One breaks not their idols . . . one dedicates them to Jesus Christ."

On the other hand, this may be an instance of a rather different point of view. Seemingly, mutilation of an idol before re-use for a Christian purpose was held to render it harmless. A slab with an inscription to Mercury had been carefully sawn into five sections before being used to cover *loculi* in an early Christian burial chamber which has recently been discovered under the cloisters of St. Severin's, Cologne.

¹ Michaelis, "Eine Frauenstatue pergamenischen Stils im Museum zu Metz," *Lothr. Jahrb.*, XVII, 1905, pp. 213 ff.; Espérandieu, *Recueil*, V, No. 4299.



FIG. 3.—STATUE OF ISIS OF METZ
LIMESTONE. METZ MUSEUM.

The present fabric probably dates to the XIth or XIIth century, but the capitals mentioned above seem to be earlier, and may have been used in an older building. In fact, only two sides of the Isis are ornamented, whilst the third side is plain, indicating that the capital had previously stood against a wall in a niche. There is a contemporary mention of the church in the IXth century, and Bishop Cunibert is said to have celebrated Mass there in the middle of the VIIth. The earliest Christian church on the site is mentioned on an inscribed stone slab which is preserved in the south wall of the choir; the stone appears to date to the second half of the IVth century, by the purity of its style and lettering. Accepting the inscription as genuine, its historical value is not impaired by the obscurity of certain passages. In it, one Clematius states that he "built this basilica anew from its foundations . . . where the holy virgins shed their blood for the name of Christ." This martyrdom probably took place during the Diocletian persecutions, though it seems to have been forgotten and swamped by the later and more sensational legend of St. Ursula and her 11,000 virgins. This legend is, however, beyond the scope of the present article, though it is interesting to remember that the church was called the Church of the Holy Virgins throughout mediaeval times, its name being changed to St. Ursula at the beginning of the XVIIth century only. In connection with the popularity of the legend and the widespread bestowal of relics, we may remember that the parishioners of St. Mary Axe were the proud possessors of "a holy relic, an axe, one of the three that the eleven thousand virgins were beheaded withal."¹

Very different in treatment from the Cologne Isis as regards design and position is the Isis panel in the cathedral at Aix, which forms one of six carved ivories which decorate the sides of the Ambo of Henry II.² This structure was given by the Emperor in 1011, but there is no record of when the panels came into the cathedral's possession, nor of when they were added to the ambo, for which they were certainly not designed in the first instance. The panels average 24 cm. by 11 cm., and are each carved out of half a tusk. The Isis panel is considered to belong to the IVth century. It is not inscribed, but the figure of Horus in the little temple is sufficient proof of the identity of the central figure. In her left hand Isis holds a shell-shaped cornucopia, which supports the little temple, and in her right hand she bears a ship. The rest of the panel is filled with smaller figures, of which the largest are a dancing Menad and Pan, both at ground-level. Perched on the roof of the temple is a cherub playing a flute; another cherub, playing a double flute, is perched above the dancing figure. Round Pan's right arm winds a serpent, and at his feet is a dog; a blade of corn flanks the panel on the spectator's right, but is not shown in the illustration (Fig. 4). Dog and serpent are, of course, attributes of Isis. The ship indicates Alexandria, and the figures refer presumably to the festival held there to celebrate the reopening of navigation in the first days of March.

L. B. ELLIS.

¹ *V. C. H.*, London, I, p. 241; *L. and P. Henry VIII*, I, 4993.

² The ambo is reproduced in Paul Clemen's *Kunstdenkmäler der Rheinprovinz*, 1916, X, 1, pl. VII, the Isis panel on p. 113, Fig. 68. In the Byzantine and early Romanesque periods the Ambo was an essential part of church furniture; during the Middle Ages it was gradually superseded in the Western Church by pulpit and lectern.



Photo Gerhard Mertens, Aachen.

FIG. 4.—ISIS AS PATRONESS OF SAILORS, MUSIC AND DANCING.
IVORY PANEL OF IVTH CENTURY ON AMBO AT AIX-LA-CHAPELLE.

EGYPT AND MESOPOTAMIA.

VARIOUS links have been suggested between objects found in Egypt and in Iraq, but so far none of the comparisons have been conclusive. This failure has been partly from lack of observing the exact nature of the objects, and partly from scantiness of information as to what was, and what was not, being made. The recent discovery of pre-Sargonic pottery at Kish, published by Mr. Mackay (*Report on the Excavations of the "A" Cemetery at Kish*), seems to bring to light a clear relationship of the two countries.

A characteristic decoration of this early pottery (Fig. 2) is the band of ornament on the shoulder, and another at the base of the neck of the vases; these are linked together by a zigzag band. This ornament was put on by a narrow comb, scratching parallel lines on the pottery. The whole of it is obviously an imitation of part of the cordage in which large jars were usually carried.

Now, after the XIIth dynasty, there appeared in Egypt a new style of decorating pottery, by a narrow comb, scratching a band of parallel lines, a mode of decoration which only lasted for two or three dynasties. The most complete example of this (Fig. 1), University College, has the pattern on the shoulder and base of the neck linked together by a zigzag band (*Diospolis*, XXXIV, p. 41). The position, the nature of the design, the form of tool used, were all the same as on the vases of Kish. This design rapidly decayed, made coarser (Fig. 3) and copied more and more carelessly, as in Figs. 4 and 5. Thus it was the source of all the well-known "scrabble" pottery which belongs to the decadence after the XIIth dynasty.

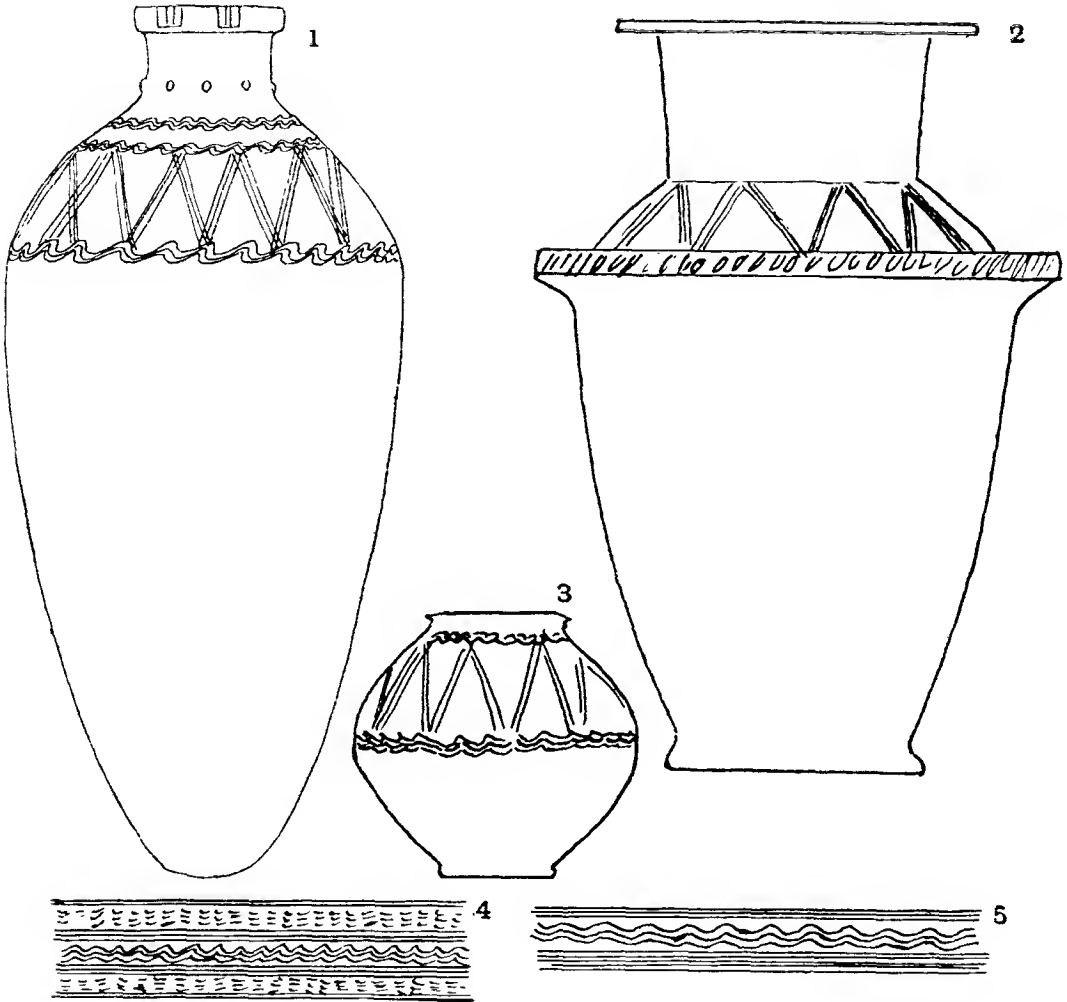
At this period the Asiatics were again beginning to press into Egypt; in the XIIth dynasty two settlements of Amu are reported as coming into the country, and they were the beginning of an infiltration which led up to the Hyksos migration. According to the Egyptian statements the XIIth dynasty ended 3300 B.C., and this would agree with the date assigned to the pottery of Kish as being pre-Sargonic and, in general terms, "certainly before 3000 B.C."

A recent paper to the Anthropological Society of Vienna (Vol. LV), by Dr. Viktor Christian, has raised the whole question of the position of prehistoric civilisation in Egypt in relation to the history. The paper is an instance of the danger of trying to draw conclusions from books, apart from a wide first-hand knowledge of the materials and the field-work. As the results may bewilder some readers, it will not be superfluous to point out the fallacies which lie in this treatment.

The position of Mesopotamian art is brought into comparison with the work in Egypt. Unfortunately this basis is by no means all settled; the archaeology of Iraq is only yet in its infancy, and fresh material is yearly filling up spaces which have been hitherto blank to us; the chronology also is still largely debated, and the relations of the early dynasties unfixed. It is therefore dangerous to argue from negatives in our partial knowledge, just as it was fruitless to deny the early age of Kamares pottery because we were yet ignorant of it in Crete.

The aragonite vases found at Ur are quoted in relation to those of the Ist-IVth dynasties in Egypt. Those vases were carefully examined in London, and none of them were like the quality of Egyptian alabaster, nor could any of the forms be mistaken for those made in Egypt. A previous paper on this subject confounded vases of the Ist, IVth and Xth dynasties to form a chronological comparison.

The use of faience in the late prehistoric age is supposed to have been greater than in the Old Kingdom ; but the contrary is the case, in view of the large wall tiles and abundance of small figures in the Ist dynasty, and the polychrome tiles



over whole chambers in the IIIrd dynasty. The forms of flint knives are stated to be the same for the prehistoric age and the XIIth dynasty ; they differ widely and distinctively. The contracted burials are stated to occur during the VIth-XIth dynasties ; but in the large cemeteries of Qau and Sedment covering this period there were no contracted burials, nor do I remember any elsewhere.

Many matters stated by Dr. Christian are equally recognised in the usual view of the prehistoric age, against which there are no valid arguments in his paper. The placing of the prehistoric remains in the series of the Ist-XIIth dynasties, which is now fully known, would be impossible to anyone having a familiarity with the discoveries of recent years.

THE HISTORICAL CHARACTER OF THE EXODUS.

IN ANCIENT EGYPT for 1923 (pp. 75-7) I ventured to put forward certain criticisms of Dr. Gardiner's paper "On the Delta Residence of the Ramessides." He dealt with these in an article entitled "The Geography of the Exodus: an Answer to Professor Naville and others," which was published in the *Journal of Egyptian Archaeology*, Vol. X, Pt. II, as far back as July, 1924; but owing to a change of domicile from London to Palestine I did not see this till September, 1925. On carefully examining it I have been led to believe that some further debate might tend to clarify and illuminate the issues, for it seems to me that in places Dr. Gardiner's thoughts would have been modified had his attention been drawn to the views which the Rev. J. S. Griffiths¹ and I have recently put forward. A clear instance occurs on p. 88. Dr. Gardiner appears to me to hit the nail on the head when, in strict agreement with the Pentateuch and the Israel stele (as we shall see later), he writes: "Systematic excavations are beginning to show . . . that the Ramessides still retained a firm hold on the promised land. Under these circumstances, the Israelites in fleeing from Egypt would have been really jumping out of the frying-pan into the fire." Unlike the friend to whom he submitted this objection, I think that the true answer is: "Quite so, and that is why they were forced to wander in the desert for forty years"; but Dr. Gardiner has not had this view before him, and accordingly he is unable to consider its bearing on his problems.

Before dealing with Pithom and Raamses I desire to clear away two preliminary points.

Dr. Gardiner writes: "Until there emerges evidence of a character wholly different from that already available, I submit that the details of the story ought to be regarded as no less mythical than the details of the creation as recorded in Genesis. At all events our first task must be to attempt to interpret those details on the supposition that they are legend" (p. 88). I do not know how far this is to be pressed, but I submit that the true scholarly canon is entirely different. Our first and last task must be to attempt to interpret all the details in the light of no preconception whatever, and to endeavour to follow the truth whithersoever it may lead, allowing our conclusions to arise naturally from an exhaustive and impartial study of all the relevant facts.

That is a difference in fundamental principle which must be remitted to our readers for judgment. Combined with this there is an alternative theory of the Exodus which commands Dr. Gardiner's assent—a Hyksos theory. Prof. Spiegelberg, in reviewing Mr. Griffith's book in the *Orientalistische Literaturzeitung* (1924, col. 338), excused himself from considering the author's case on the ground

¹ *The Exodus in the Light of Archaeology*, 1923.

that he follows Dr. Gardiner's Hyksos theory. To me this seems extraordinary, as I cannot understand how this can dispose of the solid facts and arguments adduced by Mr. Griffiths, or exempt Egyptological science from the duty of considering them. But it shows that a critical examination of this theory is now necessary.

Accordingly the plan of this article will be to treat shortly of Pithom and Raamses, and then to set out what seems to me the true view of the Exodus, and lastly to examine the Hyksos theory. This order has been adopted to avoid repetition, for many of the facts that will come before us in the first two divisions will be material to the discussion in the third.

PITHOM AND RAAMSES.

As to *Pithom*.—In view of the Hyksos theory it becomes necessary to consider the date. I do not understand Dr. Gardiner to hold that Pithom was built before the reign of Ramses II (1300–1234 B.C., Petrie; 1292–1225 B.C., Breasted). The reign of Aahmes, under whom the Hyksos were expelled, lasted from 1587 to 1562 B.C. according to Petrie, or 1580 to 1557 B.C. according to Breasted. In other words, Pithom was built more than two and a-half centuries after the Hyksos period.

As to the site, I can do no better than quote Dr. Gardiner's concluding remarks: "Mr. Wiener rightly objects to my view that, according to Sir Flinders Petrie, Tell-er-Retâbah shows no signs of a Roman occupation, and therefore cannot be Heroonpolis. This is, of course, an important argument on the side of Prof. Naville. There seems, in fact, to be a conflict of evidence, but I still lean to my preference for Retâbah. Possibly I have misjudged in weighing the evidence, and Prof. Naville may be right after all" (p. 96). The bearing of this on our enquiry may be stated as follows: In the present state of research there is no ground whatever for attacking the Biblical narrative on the basis of any geographical question connected with Pithom.¹

As to *Raamses*.—With regard to the date the same remarks fall to be made as in the case of Pithom.

With regard to the site it is indisputable that Pap. Anastasi V speaks of "the Courts of the Royal Palace," and shows that this royal palace was so situated that persons going thence to a point beyond the Egyptian frontier would pass through or near Maskhûtah in some cases. Further, it was not more than one stage from Maskhûtah. Here Dr. Gardiner writes: "The fact that this passage was not included by me in my treatise on the towns of Ramesses shows that I

¹ It is, however, perhaps right that I should say a few words on another point out of courtesy to Dr. Gardiner. He complains (*Journal*, X, p. 95) that his argument from the Antonine Itinerary (*Journal*, V, p. 269) has been neglected. I worked over the material as the result of his article, but reached the conclusion that there are too many unknown quantities for its data to be of any value in the present state of our knowledge. "Unhappily neither of the two places, Thou and Serapiu, with which Hero is there placed in direct relation, has as yet been certainly identified" (*loc. cit.*). Thus Dr. Gardiner. Contrast with this Prof. Naville's clear statements (*Journal*, X, pp. 34 ff.), from which I quote only a few words: "We know the Egyptian name of Tell el-Maskhûtah, Pithom, but we know also the Greek and Latin names Eropolis . . . and Erocastra. These two names were found on a stone in a wall at the side of the doorway. It is clearly the name of the place reached and to which the doorway gave access" (p. 36).

never thought of identifying 'the Courts of the Royal Palace' with the residence-city of Pi-Ra'messe" (p. 90). That very emphatically confirms the view that the Delta included a second royal palace in addition to the Pelusiac residence. And here I must admit that Dr. Gardiner has convicted me of a slight inaccuracy. I spoke of its being "at the distance of only one stage from Maskhûtah." He very properly rejoins that "an official who succeeded only in getting from Retâbah to the outskirts of Maskhûtah in a day, or even half a day, would have but little chance of catching a couple of runaway slaves, as the distance is only a short nine miles!" That is true of an official though not of the Israelites of the Exodus, encumbered as they were with their families, animals and impedimenta. But I think that the official's pace is amply explained by the undisputed facts. He had to enquire as to the route taken by the slaves. He was not dispatched on his journey till the evening. Unless he could arrive at Maskhûtah on the same day in time to make the necessary enquiries he could effect nothing until the next morning. Hence no argument against the location of the palace at Retâbah can be based on the shortness of the distance, while, as Dr. Gardiner points out, Heliopolis and Memphis are too far off to suit the requirements of the document. His further objections deal with other parts of the document and do not touch the portions of it which are clear. In particular he has to rely on a "partly destroyed" numeral in "a schoolboy's exercise which has some very patent and indisputable corruptions" to discredit the chronology. I can only say this: Courts of law have accumulated the experience of many centuries in the interpretation of doubtful documents in innumerable cases in which important questions touching every variety of human relationship have been at stake. As the result of that experience no court would reject the clear and indisputable portions of an ancient document on reasoning based on a lacuna in another portion of that document, which is certainly not clear and probably not indisputable. If, therefore, we are to judge the question as any similar question would be judged in a matter in which the life or liberty of any one of us was at stake, we must admit that there was a royal palace in or near the Wādî Tûmilât.

Egyptology apparently provides no evidence as to the name of this place. Now here, again, the method of the courts would differ from that of Dr. Gardiner. They would accept the uncontradicted evidence of the Hebrew narrative, which has been found to be trustworthy as to the existence and location of the palace, and hold that in Hebrew it was, at any rate, sometimes known as Raamses. There is nothing whatever to set against this. If the silence of Egyptology be held to be evidence that the place was not called Raamses, it must be held to be evidence that the place had no name at all—for Egyptology indicates no name whatever.¹

At this point I find myself in a plight which will appeal to Dr. Gardiner's sense of humour. I had quoted the best translation available of an inscription on a piece of a door-jamb. Dr. Gardiner throws doubt on what seems to me to

¹ The papyrus does not seem to me to favour the view that the Migdol to which it refers is at Tell el-Her. If there had been time for the slaves to get there and for news of this to reach Maskhûtah by the time our informant enquired, a very considerable period must have elapsed between the flight of the two servants and the commencement of the pursuit. Nor is it clear why the news of what had happened at the north wall of the Migdol should come from the desert. Migdol in Hebrew means tower. Is it not possible that there was a second Migdol in or near the desert within easy reach of Maskhûtah?

be its natural interpretation. His reputation is deservedly so great that I understand that no other English Egyptologist would venture in the circumstances to translate and explain the two columns of the inscription. It is therefore impossible to judge whether there is anything in them that throws any light on any aspect of our problems. And apparently no other English scholar will be able to make any further use of them unless Dr. Gardiner will oblige us with a rendering. In the circumstances, is it unreasonable to express the hope that he may soon add an adequate exposition of the inscription to the debt which Bible students already owe to his work?

This inscription appears also to provide evidence that foreigners and Egyptians resided side by side in Retâbah in the Wâdî Tûmilât.

And this brings us to Dr. Gardiner's point on Biblical criticism (*Journal*, X, p. 89; V, p. 265). "Modern critics have pointed out that two irreconcilable views underlie the earlier chapters of Exodus: in some places it is assumed, as throughout Genesis, that the Israelites were living apart in the land of Goshen; elsewhere, on the other hand, it is unmistakably implied that they were dwelling in the midst of the Egyptians" (V, p. 265). In a footnote he added: "Driver represents the view of the Israelites' confinement to Goshen as belonging only to J, while E pictures them as living side by side with the Egyptians." Driver's views did not seem to me worthy of notice because they were ably answered by Dr. Gardiner himself in the very next sentence in a manner that thoroughly satisfied me. "But, e.g. XII, p. 23, presumes the standpoint attributed to E, but nevertheless is assigned to J." Precisely: and here, as always, the documentary theory breaks down when tested. For the rest I have dealt with the critical contention on this point at length on pp. 57-60 of my *Essays in Pentateuchal Criticism* (1910), and the documentary theorists have failed to make any reply. In fact, if my memory serves me, Prof. König, in reviewing the book, stated that he agreed with me in this matter; but I am separated from my papers and cannot verify the reference.

THE ISRAEL STELE AND THE EXODUS.

So far we have seen that Pithom and Raamses were built in the reign of Ramses II at least two and a-half centuries after the expulsion of the Hyksos from Egypt, and that Egyptology proves that there was a royal residence situated in the position assigned by the Pentateuch to Raamses. We now come to the determining factor in the whole case. There are many minor considerations which may help to confirm our judgment one way or the other in regard to the historical character of the story of the Exodus; but there is only one decisive, dominating issue—the relation of the event recorded on the Israel stele to the narrative of the Pentateuch. Here it is a case of win or lose, for the historical character of the narrative on the one side, and for the attack of destructive criticism on the other.

"And it came to pass in the course of those many days that the king of Egypt died" (Exod. ii, 23). This would quite naturally refer to the death of Ramses II, who reigned for sixty-six or sixty-seven years, and, if so, the subsequent drama is enacted under his immediate successor, Menephtah. We are now more than three centuries from the date of the expulsion of the Hyksos.

The Israel stele is dated in the fifth year of Menepthah. Its material passage, according to Breasted,¹ is as follows :—

“ Israel is desolated, his seed is not ;
Palestine has become a widow for Egypt,
All lands are united, they are pacified.
Every one that is turbulent is bound by King Menepthah.”

In view of the Hyksos theory I quote the following from Dr. Hall : “ The word ‘ Israil ’ in the stele cannot be anything else than Israel . . . and it is not a place-name but a folk-name, being ‘ determined ’ by the sign of ‘ people ’ not that of ‘ town.’ ”²

Dr. Hall does not suggest—and indeed it cannot be suggested, that the Hyksos are meant. But the expression is a perfectly correct way of referring to the Israel of the wanderings. According to Breasted the reference “ is made up of conventional phrases, applied also to other peoples.” Of the parallels he quotes, the first is sufficient for our purposes. “ Those who reached my border are desolated, their seed is not.” *That is used of invaders*, and it is word for word the same as our reference to the people of Israel.³

Hence the inscription would be satisfied by an unsuccessful invasion by the Israel of the wanderings. The sentence as to Palestine means that it had no protection against Egypt, *i.e.* is a land of Egyptian vassals. King Menepthah had established an Egyptian peace, partly as the result of defeating Israel, which secured Palestine from the danger this people had threatened. Writing in 1916, I inferred from the language used that the Pharaoh had not been present.⁴ Subsequently I discovered that I had been anticipated by Prof. Naville.⁵

In the Pentateuch we have two accounts of a defeat that precisely agrees with the data of this inscription. In Deut. i, 19–46, we read of an attempt by Israel to invade Canaan from the south.

Leaving Horeb, the Israelites passed through the desert to the hill-country of the Amorites and reached Kadesh-barnea. Moses wished to attack, but the people suggested that spies should first be sent. On their return they made a report which was fatal to the *morale* of the people. Thereupon the command was given to turn and go by the way to the Red Sea, but the Israelites veered round and insisted on attacking—this time against the will of Moses.

“ And the Amorites, which dwelt in that mountain, came out against you, and chased you, as bees do, and beat you down in Seir, even unto Hormah (i, 44).

“ Then we turned, and took our journey into the wilderness by the way to the Red Sea, as the Lord spake unto me : and we compassed Mount Seir many days (ii, 1).

“ And the days in which we came from Kadesh-barnea, until we were come over the brook Zered, were thirty and eight years ” (ii, 14).

That constitutes a perfect parallel to the Menepthah stele. Thirty-eight years before a date in the fortieth year the Israelites left Kadesh for good, because they had attempted to invade Canaan, and had met with an overwhelming defeat

¹ *Ancient Records*, III, p. 264.

² *Ancient History of the Near East*, 1st ed. (1913), p. 404.

³ *Ancient Records*, III, p. 257 f.

⁴ “ The Date of the Exodus,” *Bibliotheca Sacra*, July, 1916, or separately, *Bibliotheca Sacra*, 6, Oberlin, Ohio, U S A.

⁵ *Journal of Egyptian Archaeology*, II (1915), pp. 195–201.

at the hands of Menepthah's vassals. The historical character of the narrative cannot be questioned, for nations do not claim defeats they have never experienced. Our generation, at any rate, has had intensive experience of that. And here we have a people claiming that on attempting to invade a country in which they subsequently ruled, they were so crushingly worsted that they could attempt nothing more for thirty-eight years. If the disaster was not historical, no religious writer at any date could have hoped to commend his teachings to his people by enforcing them with an (invented) narrative of an overwhelming disaster, which they had never experienced. The date exactly fits Menepthah's inscription, for on any natural reading of the events of Exodus the year here indicated would fall within the first four years of his reign. The same applies to the agents of the defeat, for the Palestinians were Pharaoh's vassals.¹ As Dr. Gardiner says, "The Ramessides still retained a firm hold on the promised land." Nor is there any possibility that this refers to some other defeat, for each of the narratives clearly records a disaster that gave prolonged security to Palestine from the people of Israel. The defeat recorded on the stele could have left the Israelites in no case to attempt any other serious military undertaking for some years to come: the defeat of Deuteronomy crippled their military enterprise for thirty-eight years. "The Israelites in fleeing from Egypt had merely jumped out of the frying-pan into the fire." Or we may put the matter in the language used after the defeat by older critics of Moses, who fully agreed on this point with Dr. Gardiner. "Is it a small thing that thou hast brought us up out of a land flowing with milk and honey, to kill us in the wilderness, but thou must needs make thyself also a prince over us? Moreover thou hast not brought us into a land flowing with milk and honey, nor given us inheritance of fields and vineyards: wilt thou put out the eyes of these men?" (Num. xvi, 13 f.).

I have begun with Deuteronomy because careful study has satisfied me that the text of Numbers, while narrating the same events, has suffered in transmission. To avoid overloading this article, this aspect of the matter is not discussed, but anybody who is interested will find it fully considered in the literature given in the footnote of this section, to which I would earnestly invite Dr. Gardiner's attention.

Thus we see that the Hebrew and Egyptian records are in complete harmony, and each is attested by evidence which cannot be doubted. On the one hand we have a people declaring that it served in slavery and was compelled to build specified cities in the territory of another people. and that after its escape it attempted to invade the country it subsequently occupied, but was so disastrously defeated that it had to wander in a wilderness for some thirty-eight years. Then with restored *morale*, and the replacement of its heavy losses in the field by a new generation of fighting men, it was able to attempt a fresh invasion by an easier line, when the historical situation appeared to offer a favourable opportunity. Those are events the historical character of which is guaranteed by the psychological impossibility of supposing that any nation would gratuitously invent narratives so little to its credit. On the other hand, the Egyptian record is composed of the testimony of excavations and contemporary inscriptions which cannot be doubted.

¹ Cp. Holzinger's remarks in reviewing my "The Date of the Exodus," "Darüber dass Nu. XIV, 40, nicht den Pharaon als Gegner nennt wird sich reden lassen—warum soll ein solcher sich nicht den Sieg eines Vasallen gutschreiben?" *Theologische Literaturzeitung*, 1918, col. 76.

Those are the main outlines: the details add corroborative evidence. The site of the Egyptian capital; the attitude of the Hittites, justifying the fears expressed in Exod. i, 10; the known facts as to Pithom and Raamses¹; the length of the reign of the Pharaoh of the oppression; the constant reference to Pharaoh without the name, in accordance with contemporary Egyptian usage; the dating of the foundation of Hebron by the Tanis era (Num. xiii, 22), so natural in a writer fresh from Egypt, and so improbable in a Palestinian; the numerous Egyptian touches—all point in the same direction. The chronology is a close fit. The Menephtah stele is dated in April of the king's fifth year. Israel's defeat at Hormah was in the third year of the wanderings, and as the spies went at the time of the first ripe grapes (Num. xiii, 20), *i.e.* the end of July or the beginning of August, the battle probably falls in September. Thus the Exodus could only have taken place in the first or second year of the reign, for at least three years elapsed from then to the date of the stele in the fifth year, *i.e.* a date when Menephtah had completed four, but not five, years of his rule. As the plagues ran from the Red Nile, in May or June, to the Exodus at the end of March or the beginning of April, they require ten months; and the events between the death of Ramses and the beginning of the plagues could not be compressed into two months. Hence Menephtah must have been over a year on the throne at the date of the Exodus, and this leaves his second year as the only one possible.²

And now for the recent discovery at Beisân to which Dr. Gardiner alludes.³ He quotes a sentence from Dr. Fisher. I would repeat that sentence with the addition of a few words: "This group of dated records found *in situ* is sufficient proof that the town had remained in Egyptian hands practically from 1313 to 1167 B.C. Towards the close of this period Egyptian domination in Palestine was again on the wane."⁴ It is precisely to the close of this period, when Egyptian domination was on the wane, that the Israelite invasion belongs. The date 1167 B.C. is that given by Breasted for the death of Ramses III, but the chronology is not quite certain. According to Sir Flinders Petrie, 1194 B.C. was the date of the last Egyptian campaign in Palestine for two and a-half centuries.⁵ His date for Menephtah's accession is 1234 B.C., so that forty years from that king's second year (1233 or 1232 B.C.) would clear this campaign and bring us to a date when conditions were suitable for the Israelite invasion. Ramses III acceded in 1202 B.C. In the spring of his eleventh year he had to face an invasion of western enemies, which may reasonably be supposed to have called for the concentration of most of his available forces in Egypt.⁶

¹ Prof. Kyle, after examining Maskhûtah, personally wrote as follows: "The bricks were laid in mortar, contrary to the usual Egyptian method of brick-work; the lower courses were filled with good clean straw, those of the middle courses were made with stubble mixed with weeds and all pulled up by the roots, while the bricks of the upper courses were made of Nile mud without the admixture of any binding material whatever" (*Bibliotheca Sacra*, 1917, p. 10); *cf.* Exod. i, 14. The use of bricks of any one of these three kinds would not have been singular, but their combination in this way is remarkable.

² A further corroboration may be mentioned: in papyrus, Anastasi VI tells of the passing of Edomite Bedouin into the Wâdi Tûmilât. At that time the Israelites must already have left, otherwise there could not have been room for immigration into this small area (*see* Petrie, *Egypt and Israel*, 2nd ed., p. 30).

³ *Journal*, X, p. 88.

⁴ *The Museum Journal* (Philadelphia), December, 1923, p. 236.

⁵ *Egypt and Israel*, 2nd ed. (1923), p. 53.

⁶ *History of Egypt*, III, 2nd ed. (1918), p. 153.

Three years previously a league of northern tribes had "encamped in one place in the midst of the land of Amor; they swept away the inhabitants, but fire and the grave were before them."¹ Thus the Amorites had been tremendously weakened and the Egyptians were otherwise engaged when Israel's invasion occurred.

According to Prof. Breasted, Meneptah acceded in 1225 B.C., so that his second year would be 1224 or 1223 B.C., and Ramses III reigned from 1198-1167 B.C. His interpretation of the events differs from that of Sir Flinders Petrie, but is substantially as favourable to our view. He thinks that immediately after the invasion of the westerners in the king's eleventh year there was a fresh Syrian campaign. "Whether as of old in the days of Hittite aggression the king of Amor had made common cause with the invader we cannot now discern; but following closely upon the last Libyan campaign, Ramses found it necessary to appear in Amor with his army. The limits and the cause of the campaign are but obscurely hinted at in the meagre records now surviving. It was the last hostile passage between the Pharaoh and the Hittites; both empires were swiftly declining to their fall."² It is after that campaign and in the beginning of the period of the decline that we naturally place the Israelite invasion of Canaan.

There is also further evidence from another quarter, which has been published since the appearance of Dr. Gardiner's article, and proves the correctness of the view just stated. In Vol. I of his *Geschichte des Israelitisch-jüdischen Volkes* (1924), Prof. E. Sellin states (p. 97) that both he and Watzinger have independently reached the conclusion that their former results stand in need of correction and that the date of the capture of Jericho by Joshua should in the light of the excavation be placed at *circa* 1200 B.C. This accords closely with the date to be deduced from Egyptian chronology on the basis of the foregoing view of the Exodus.

Are there any Biblical facts to set against this? Three passages call for notice. In Judges xi, 26, we read: "While Israel dwelt in Heshbon, . . . *three hundred years*," but the date is generally regarded by modern editors as an interpolation in Jephthah's speech. In fact the subsequent words cannot mean, "Wherefore did you not recover them within that time?" The Hebrew can only mean, "*And why did ye not recover them at that time*," which shows the date not to be an original part of the sentence. Accordingly we should translate: "When Israel *settled* in Heshbon," and attach the phrase to what precedes, omitting the words "three hundred years." The question will then be: "And now art thou anything better than Balak the son of Zippor, king of Moab? Did he ever strive against Israel, or did he ever fight against them when Israel settled in Heshbon? etc. And why did ye not recover them at that time?"

In I Kings vi, 1, 480 years after the Exodus is given as the date of the Temple, but this verse is also generally regarded as not original.

The third passage, Gen. xv, 13-16, is more interesting. "13. And he said unto Abram, Know of a surety that thy seed shall be a stranger in a land that is not theirs, and shall serve them; and they shall afflict them four hundred years; 14. And also that nation whom they shall serve, will I judge: and afterward shall they come out with great substance. . . . 16. And in the fourth generation they shall come hither again."

¹ *History of Egypt*, p. 150.

² *Op. cit.*, p. 483.

That is not self-consistent, for a generation was not regarded as 100 years (Gen. xvii, 17), and even so the period from the entry into Egypt to the invasion was 470 years.

[As the oppression of the Israelites would begin at the expulsion of their kindred Hyksos, 1585 B.C., from that until the Exodus in 1232 B.C. would be 353 years, so that the nearest century would be 400 years. Perhaps the text of "fourth generation" is a corruption of "fourteenth," as that would fit with generations of 25 years during the oppression; such is probably the Jewish average, as in the royal family a generation was 22 years.—F. P.]

Such is the case as to the Exodus to which I venture to invite Dr. Gardiner's attention. If he is of opinion that it is worthy of serious consideration I would ask him to look up the writings in which it is elaborated.¹

He will there find some details considered of which I have not thought it necessary to treat here. It is submitted that if this case stands it disposes of the view that the narrative is legendary, for it is contrary to the very nature of a legend that it should meet the exacting archaeological and chronological tests of such an investigation as this.

THE HYKSOS THEORY.

It now remains to examine the Hyksos theory. Dr. Gardiner writes: "That Israel was in Egypt, under one form or another, no historian could possibly doubt; a legend of such tenacity representing the early fortunes of a people under so unfavourable an aspect could not have arisen save as a reflection, however much distorted, of real occurrences. But the Hyksos invasion and the subsequent expulsion of the Hyksos afford quite sufficient basis for the origination of the legend. Nor would it make the slightest difference to this assertion should it be proved that the Hyksos were racially quite unrelated to the Israelites, for nations inherit with all possible ease the traditions of the lands which in course of time they come to occupy."

I pause there for a moment because I think that many of Dr. Gardiner's readers may not realise that in fact he believes in *two* Exodî. His case is that Israel was in Egypt and remembered nothing of its own Exodus, but only the expulsion of the Hyksos in a distorted form.

He then continues: "Would it not, indeed, be strange if the whole episode of the Hyksos had left no trace in Hebrew legend? When, further, it is taken into consideration that the date of Joseph, according to any reasonable computation, falls within the Hyksos period, surely little doubt can be entertained but that the fortunes of the Shepherd kings are somehow imaged in the Exodus story." I note with pleasure that in Dr. Gardiner's opinion the Pentateuchal narrative is so far trustworthy that we can make chronological computations from it. These computations can only relate to an actual event affecting a real person called Joseph, since a legend can have no date.

¹ J. S. Griffiths, *Exodus in the Light of Archaeology*; H. M. Wiener, "Essays in Pentateuchal Criticism," pp. 114-38, *Bibliotheca Sacra*, July, 1916; or the reprint, "The Date of the Exodus," October, 1917; October, 1918; April and October, 1919; July, 1920 (reply to Prof. Barton). These articles are not available in Jerusalem, and I have not been able to refer to them. It is much to be desired that some munificent benefactor should present the back volumes of *Bibliotheca Sacra* to the American School of Oriental Research here.

Dr. Gardiner then proceeds: "But the mention of the town of Raamses-Ramesses introduces an ingredient of later date, and it is not impossible that, as the quotations from Manetho and Chaeremon in Josephus suggest, some further events at the beginning of the Nineteenth Dynasty may have become blended with the memory of the Hyksos."¹ What are those events? To whom did they happen? How did Israel come to blend them with the memory of other events which had happened not to it, but to the Hyksos, some two and a-half or three centuries earlier? Manetho and Chaeremon afford no parallel, for they are no part of the national record of Israel; whereas what is here supposed is that the memory of certain unhappy events which had not happened to the people at all were made part of its national consciousness. Dr. Gardiner refers to Dr. H. R. Hall's *Ancient History of the Near East*, 1st ed., pp. 408-9, as the source of his views. Dr. Hall's statement is characterised by the omission to produce a single particle of evidence. Dr. Burney's² criticisms of it seem to have been overlooked by Dr. Gardiner. They are valid as far as they go, and should be studied, but they must now be supplemented.

In testing this theory we have to operate with four different elements:—

- (A) The expulsion of the Hyksos.
- (B) The Exodus of Israel.
- (C) The later elements.
- (D) The actual Biblical narrative.

(A) If the expulsion of the Hyksos is reflected in our Biblical narrative, we should expect to find points of contact between the two. And most certainly the two accounts could not be of such a nature as to be mutually exclusive. Now what are the facts? The Hyksos rulers were kings in Egypt. "The later Hyksos seem to have become entirely Egyptianised. They adopted the full Pharaonic dignity, and, as good Egyptian kings, built Egyptian temples and venerated Egyptian gods" (Hall, p. 219). The final revolt led to their expulsion after a long era which, in Dr. Hall's opinion, lasted about forty-five years, on and off. Several Egyptian Pharaohs died or were killed during its course, and the fortunes of the war fluctuated considerably. At last "The Hyksos king . . . was driven north and east to Tanis and the great entrenched camp at Avaris . . . whither the young king followed him in hot pursuit" (pp. 225 ff.). It would appear that "the siege of Avaris . . . must have been long protracted."³

A contemporary who was present writes: "Then they proceeded to spoil Avaris; and I brought away spoil thence: one man; three women; a total of four heads. And His Majesty gave them to me for slaves."⁴ This, however, was not the end of the Hyksos: "Amosis himself pursued them to a fastness of theirs at Sharūhen, in Southern Palestine, and later to the coastland of Zahi or Phoenicia further north."⁵

In all this there is not a single point of contact with the Pentateuch. The Hebrew never suggests that the people of whom it tells were of any account in Egypt, with the single exception of Joseph, who rose to a high ministerial position

¹ *Journal*, X, pp. 87 ff.

² *Israel's Settlement in Canaan*, pp. 91-4.

³ Battiscombe Gunn and Alan H. Gardiner, "The Expulsion of the Hyksos," *Journal of Egyptian Archaeology*, V, p. 53.

⁴ *Ibid.*, p. 49.

⁵ *Ibid.*, p. 39.

more than four centuries before the Exodus. There is no trace of kings or pharaonic dignity or building of Egyptian temples; there are no battles, no sieges; there is but one change in the occupation of the Egyptian throne, no capture of Avaris or taking of Israelite captives, no pursuit to Palestine or Phœnicia. These things are all outside the ken of the Pentateuch; and, what is more, they belong to a set of circumstances so totally different that their very possibility is excluded. How could such events be fitted into the story of a people doing forced labour for the Egyptians and suffering from the Egyptian attempts to slay its male children? How can they be brought into the same historical picture as the long religious debate with the Pharaoh, and the plagues? The only point of contact is that the Hyksos left Egypt and so did the Israelites, but as Dr. Gardiner believes that there was an Israelite Exodus, it is impossible to suggest that the people had forgotten that they themselves had been in Egypt, and only believed that they had succeeded with great difficulty in leaving it because the Hyksos had been expelled from it against their will.

Moreover, the explanation is not explanatory. "A legend of such tenacity representing the early fortunes of a people under so unfavourable an aspect could not have arisen save as a reflexion . . . of real occurrences." Precisely: but nothing whatever of the unfavourable aspect is to be found in the story of the Hyksos. Their story, if not always a story of success, is at least a glorious one of the game of kings. The Pentateuchal narrative, on the other hand, is that of the *corvée* of common people. And the very points that most need the explanation of "real occurrences" find neither prototype nor possible source in the fortunes of the Hyksos.

(B) The Exodus of Israel according to Dr. Hall: "The Hebrews . . . entered the land of Goshen during the period of Hyksos domination, and left the country at the time of the expulsion of their patrons, or shortly afterwards" (p. 409, *note*). They wandered in desert regions bordering on Canaan for about two centuries. They are then identified with the Khabiru who overran Canaan about 1390-1360 B.C. (*ibid.*, pp. 407 ff.).¹

It is useless to compare this with the Biblical narrative, for Dr. Hall sits far too loosely to any statement in the Biblical texts that does not suit his convenience for them to produce any effect on his mind.² But there are archaeological facts. The date given by excavation for the Israelite conquest of Jericho is fatal to the whole scheme. So is the Israel stele. If Israel had been domiciled in Palestine for a century and a-half in the days of Menepthah, we should have had a mention of the place or places captured, not a reference couched in terms appropriate to a body of invaders.

Another test may be applied. We can ask why the Hebrews left. If they had gone with their patrons to share their further fortunes the matter would have been intelligible: but this was clearly not the case. Now why should people who had been domiciled for centuries in fertile territory elect to leave it and wander

¹ There is not a particle of evidence that the word Khabiru is a transliteration from any Semitic language or that the people so designated were Semites at all. Philologists, assuming what they wished to prove, have begun by taking it for granted that the cuneiform characters were a transliteration from the Hebrew; they have then taken one out of several possible equivalents in Hebrew consonants and claimed that the word stands for Hebrews. They have yet to begin to forge the first link in their chain of proof.

² I must, however, not be taken as identifying Dr. Gardiner absolutely with Dr. Hall in this respect.

in a desert for a couple of centuries? In the Pentateuch the matter is intelligible, for the oppression had become intolerable: but that is the very element that is assigned by Drs. Gardiner and Hall to a later date. How, then, explain the course of action of their Israel? It was neither oppressed nor expelled by force, and if it acted as they hold, it jumped into the fire quite gratuitously, not out of the frying-pan, but out of a paradise.

(C) The later elements. Of the origination and adoption of these no explanation at all can be offered. To suggest that some centuries after Israel had left Egypt, some Israelite writer took over the story of an oppression which happened (if at all) to some other people, and that his narrative was then accepted as historical, is to proclaim the bankruptcy of this method of dealing with history. No historian would state that his people had built two specified cities by forced labour in enemy territory unless such was really the fact. Nor would any people accept the word of a historian who acted so incredibly.

Lastly we come to (D) the Biblical narrative. And here I would ask, what sort of scientific justification can be put forward for suggesting that any narrative in the world was ever compounded in the way claimed? Dr. Gardiner holds that it reflects events that it certainly does not reflect, that it does not record the fortunes of the people whose fortunes it professes to record, that it incorporates late extraneous matter of a discreditable sort which formed no part of the national experience, and that these and other elements, which he and Dr. Hall do not discuss, were somehow amalgamated into a story which in the resulting form contained not a single element of truth. Such a theory requires us to suppose that this strange compilation was accepted unquestioningly, unanimously, enthusiastically, by the people it dishonoured, as the authentic record of its past, although it had never experienced any one of the episodes related, and that it was held in such reverence that it came to be regarded as the word of God.

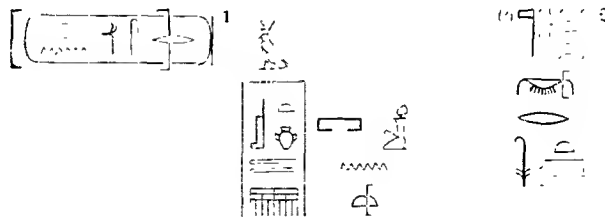
Such hypotheses as these appear to me to be woven of such stuff as dreams are made of, but apparently they are put forward in all seriousness by responsible scholars. On what known canon of the investigation of evidence do they base their researches?

HAROLD M. WIENER.


EGYPTIAN SEALINGS IN THE COLLECTION OF THE ACADEMICIAN
N. P. LIKHATSCHEW.


THE celebrated collection of N. P. Likhatschew, containing a great number of stamps and seals of the most different cultures, comprises also a few, but valuable, ancient sealings of various periods of Egyptian history. They were all bought. On account of the interest they have, I undertake to edit them, although not all the details of their inscriptions are clear to me. The specialists who dispose of richer materials in this sphere of Egyptology will correct my reading.

No. 1.—A small fragment of a sealing with portions of two impressions of a cylinder; it is of a dark grey clay. The surface on which the stamp was pressed is polished. The height is 0·6 inch, the breadth 1·1 inch. The hieroglyphs of the fragmentary inscription can be connected in the following manner:—



Here we have evidently a fragment of a clay stopper³; a great number of such were found by the Germans during the excavations of the temple of the king Ra-en-user.⁴ Perhaps the fragment of the collection of Likhatschew will offer some interest for the edition of these stamps which is being prepared by the Berlin Museum.⁵

¹ On the seal-stamp the hieroglyph  of the cartouche is smaller than the other hieroglyphs. Also on the cylinder of the epoch of Sahu-ra the hieroglyphs of the cartouche *njsw.t bjtj* are smaller than the hieroglyphs of the cartouche of Hor. See Möller, *A. Z.*, 1907, p. 129.


² Cf.  of the inscription of Ra-en-user, Gauthier, *Le livre des rois d'Égypte*, I, p. 128, No. XIII.

³ The manner in which the jars were sealed; see Flinders Petrie, *Medum*, p. 24, Pl. XIII.

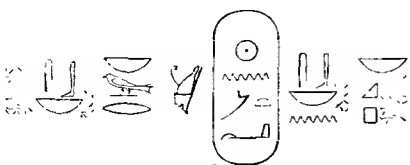
⁴ L. Borchardt, *D. Grabdenkmal d. Königs Ne-user-Re*, Leipzig, 1907, pp. 132, 138.

⁵ *Ibid.*, p. 59. The untimely death of G. Möller detained this edition.

No. 2.—A somewhat decayed sealing of black clay. The seal may have been in the form of a scarab. Impresses of papyrus and of cord are seen on its back. The length is 0·7 inch, the breadth 0·5 inch. The inscriptions in two lines are as follows :—

1. 

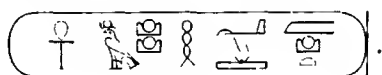
1. . . . the priest of R^c-Smt¹ [the lord]
of Kp . . .

2. 




2. . . . Šbk the lord of the crown of
Upper Egypt of (?) Amenemhat III.
Šbk the lord of Kp . . .

If my reading is right, we have here a very early mention of the god Smt, the god with a crocodile's head, and consequently one of the variety of Sobk.² His association with R^c is a manifestation of solar syncretism of the Middle Kingdom. If Sobk in the second line is called the lord of the crown of Upper Egypt, we remember the hymns to both diadems, which praise the king's crowns,³ but in connection with the cult of Sobk.

No. 3.—A pottery mould for cartouches. The length is 0·8 inch, the breadth 0·3 inch. The inscription is the first cartouche of the god Aton, who was established from the beginning of Ekhnaton's reform until the first years of the transportation of the capital to Tell el-Amarna.⁴



Such moulds were found in Tell el-Amarna. The god Aton, by receiving the cartouche for his name, now becomes the real king of Egypt. Ekhnaton was only his mortal substitute. Therefore the years of Ekhnaton's reign were dated by the years of the reign of Aton. If the reform of Ekhnaton were prolonged, the era of the god Aton would be established in Egypt. Being a god-king, Aton could not admit the worship of god Amon of Thebes, who was the king of gods before him. There could not be two kings among gods, or among men.⁵

¹ It would also be possible to read  *hsmt*. Then we could compare this *hsmt* with *hsmt* on the great stela of the XIIth dynasty of Akhmim. See *Rec. de trav.* XI, pp. 84-5. I do not think that the sign that I read  could be read as .

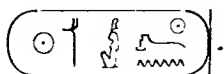
² See Lanzone, *Dizionario*, III, p. 1077.

³ Ad. Erman, *Abhandl. Berl. Ak. Wiss.*, 1911.

⁴ K. Sethe, *Beiträge z. Gesch. Amenophis VI* (*Nachr. K. Ges. Wiss. Got. Phil.-hist. Kl.*, 1921), p. 107 f.

⁵ Ekhnaton persecuted only Amon of Thebes and other Theban gods. In other towns only the worship of Theban Amon was persecuted by him. He abolished all the names of Amon of Thebes in Elephantine, but left untouched the names of the local Amon of Elephantine. Too little attention was paid to this inscription, although it evidently proves that the reform of Ekhnaton was not exclusively monotheistic.

No. 4.—Impression of a bead in dark grey clay. The length is 1·0 inch, the breadth 0·35 inch. The cartouche of the throne-name of Ramses II.

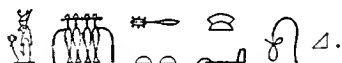








The hieroglyphs are very negligently cut. This carelessness is obvious, especially in comparison with the fine hieroglyphs of No. 3.

No. 5.—Impress of a finger ring on dark grey clay. The length is 1·0 inch, the breadth 1·1 inch. The surface, on which the ring was pressed, is smooth. The traces of a rather thick cord are seen on the fracture. The two impressions are of the cartouche of Ramses VI. On this ring two variations of the throne-name *Maat·neb·ra*, *Mery·amen* of King Ramses VI¹ are united, forming a pretty antithetic group. Very interesting is the choice of the name *Maat·neb·ra* by the king of the XXth dynasty. It indicates the cult of Amenhotpe III, existing already in that epoch. The left figure should face right.



No. 6.—Impress of a finger ring on red clay. On the fracture there are traces of the cord. The length is 1·3 inch, the breadth 0·8 inch. On the clay are two impressions reading



We have here, evidently, a stamp of the seal of the temple of the god of Athribis—Hor-Khent-khetet.² The hieroglyphs  could be interpreted as “feast.” In that case the hieroglyphs   include the name of a feast.³ As a conjecture one could compare the *wk* to the known feast   . If the inscription of our seal could be really interpreted by this means, namely, Hor-Khent-khetet, the feast *wk*, so we would have the stamp of the temple of Athribis, by which the room with the attributes of the cult of the above-mentioned feast was sealed.⁵ The temple of Athribis was one of the most renowned temples of Egypt. Yet in the 1st century B.C. we read about it in one inscription: τὸ ἐν Ἀθρίβει τοῦ Ἀρκετεχθαῖ (scil. ἱερῶν) τὸ μὲν πρῶτον καὶ λόγιμον ἀρχ[α]ϊότατον τε κα[ὶ] ἐνδοξότατον, κ.τ.λ.⁶ But there are not many inscriptions

¹ See Lepsius, *Königsbuch*, Pl. XXXIX, D. k. Unfortunately the requisite volume of H. Gauthier, *Le livre des rois*, is not to be had in Leningrad.

² About this god see the excellent article of W. Spiegelberg, “Zur Geschichte des Tempels des Harkhentehtai zu Athribis,” *Rec. de Trav.*, XXIX, pp. 53-4. See also F. v. Bissing, *Ä.Z.*, XL, p. 144, and H. Madsen, *Ä.Z.*, XLI, p. 115.

³ I think that in *Hr-knt-k-wk* one cannot see a proper name.

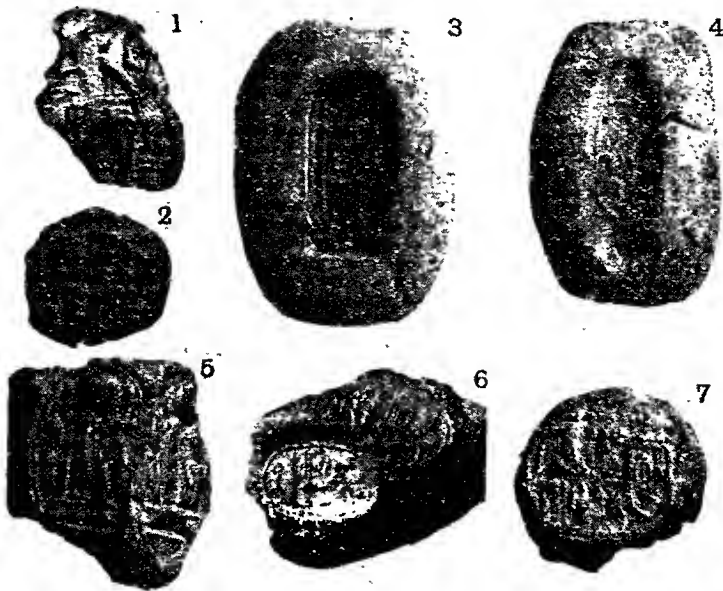
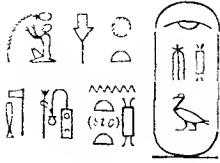
⁴ The transition of *g* in *k* is certainly possible. But it is improbable that the traditional name of the feast on the temple's seal would be transcribed by such an unusual manner.

⁵ About the seals of the temples, see O. v. Lemm, *D. Ritualbuch des Ammon-dienstes*, p. 25 f.

⁶ See W. Spiegelberg, “D. Demotischen Inschriften” (*Catal. génér.*), p. 22.

about it and about its god. Therefore our stamp regarding this temple is not devoid of interest. The time of its rise can be dated, as I think, to the epoch of the New Kingdom.¹

No. 7.—Impress of a seal on black clay. On the back are the traces of the cord and of the surface of papyrus. The length is 0·95 inch, the breadth 0·85 inch. The inscription contains two titles—priest of Sokhmet and *ιεργραμματεὺς* of Neit—with the cartouche of King Aahmes-si-Neit. It is to be supposed that the inscription is entirely conserved, and therefore the cartouche of Aahmes-si-Neit will scarcely be part of a name, but serves to date the seal. The accumulation of the priesthood of Neit and of Sokhmet in one is curious. [There might be space for a sign such as *mer* beyond the cartouche, thus giving a name.—F. P.]



CLAY SEALINGS.

1. RAENUSER.
2. AMENEMHAT III.
3. THE GOD ATEN.
4. RAMESES II.
5. RAMESES VI.
6. ATHRIBIS TEMPLE.
7. AAHMES-SI-NEIT.

¹ There is in the Hermitage Collection a beautiful statuette of the time of the Middle Kingdom; on its base is carved the offering formula, mentioning the god Hor-Khent-khetet.

V. STRUVE.

JOURNALS.

Annals of Anthropology and Archaeology. Liverpool. Vol. XIII, 1, 2.

YEIVIN, S.—*The Mond Excavations at Luxor.*—The work undertaken by Mr. Mond last season was the clearing of the tomb of Rames, the vezier of Amenhetep III and IV. For this purpose it was necessary to have a large dumping ground, and an area behind the Ramesseum was cleared for the purpose. The number of tomb-shafts found occupied the whole season, and still some remain. These tombs are from the XIth dynasty onward. Almost all the shafts and galleries had been reused, so the dating of objects can only be by their nature. No important objects were found. The greater part of the tomb of Rames was cleared, noting its reuse at various times. In one place the sculpture was plastered over, and fresh reliefs modelled, showing the reuse by the ancients. The sculptures are of special interest in this tomb as, beginning in the style of Amenhetep III and being continued in the Amarna style, much being half-finished will show the processes of work. The complete clearance and publication is to follow. A painted tomb was found of a chief prophet of Anpu and Khonsu, and temple scribe of Mentu, named Hati-añy. Doubtless this is the same as the high priest of Mentu, in the great Unnefer family, recorded on the group monument at Naples.

GRIFFITH, F. LL.—*Oxford Excavations in Nubia.* The older deities of Nubia, Hathor and Horus, were supplanted by Isis and Osiris in the Meroitic period. Various minor excavations and graves are here recorded, but none of historic importance. The fort at Faras appears to be entirely Meroitic, though surrounding the temple of Tahutmes III.

Journal of Society of Oriental Research. October, 1926.

ALBRIGHT, W. F.—*The Historical Background of Genesis xiv.* This article is an interesting discussion of the Abrahamic period; the more so as the writer is returning to the historical point of view. He says, "most saga is composed of historical episodes clad in motives of folkloristic origin . . . Some day, we venture to say, the majority of Old Testament scholars will hold views of Hebrew history which would now seem very uncritical." The position reached in this paper may be here summarised. The catastrophe of Sodom is dated by the remains at Bab el-Drá which belong to the early Bronze Age, dated here to 1800 B.C. This was a period after the break up of the Khammurabi dynasty, when the Cossaeans came westward, and apparently also the Umman-Mandu, or Indo-Indians.

A group of records, known as the Spartoli tablets, deal with this period. They state how an alliance of kings, including Tudkhala (Tidal) and Kudur-

Lakhamal, King of Elam (Chedorlaomer), ravaged Babylonia. The latter king levied the Umman-Mandu as auxiliaries. The absence of Cossaeon names indicates that the period must be before the IIIrd dynasty of Babylon, 1742 B.C. This invasion, therefore, probably belongs to the dark period after the Khammurabi dynasty. This Ist dynasty is now placed at 2169–1870 B.C., and the Hittite invasion, which destroyed it, as at 1870–1742 B.C., a period of which we knew nothing until these fresh tablets. A reference to this invasion of the Umman-Mandu is among the astrological texts. They are probably the Indo-Iranians, whom we know as the introducers of the horse and the Vedic gods into the Western world.

The earthen camp at Tell el-Yehudiyeh is accepted as Hyksos, as well as that at Heliopolis. These give the type which may also be recognised near Kadesh (Orontes) at El Mishrifeh, which is seven times the area of Yehudiyeh; also at Tell Sefinet Nuh, which is equal to Yehudiyeh. At Kadesh, now Tell Neby Mindu, is a similar rampart. These are compared with the Tepes of Transcaspia, and it is concluded that this was a Central Asian form of fortified camp, brought west at the Cossaeon or Iranian migration, and known to us as a Hyksos form.

The Mandu of the Spartoli tablets are apparently mercenary allies of the Elamites, as the Goyim ("nations") are in Genesis, and they seem to have settled in Babylonia. The date which is indicated for the narrative of Genesis xiv would be about 1800 B.C. or within 50 years of that. Shinar seems certainly to be Singara on the eastern branch of the Euphrates. Joining this on the west was the region of Khana. From here tablets have lately been obtained relating to a dynasty of kings who were independent; though written in Akkadian of the Ist dynasty, and of the type of that age, they are yet a little later, as they ignore Babylon. These records may then be placed about 1850 or 1800 B.C. Thus the references in Gen. xiv to the kings of the east are historically probable. The effect of the barbarous invasion of the Mandu is seen in the mounds of ruins in Syria and Northern Mesopotamia; fully two-thirds of this region was abandoned after the early Bronze Age. Aram Naharain appears to have been desolate for many centuries; the earlier place-names vanished, and the later ones are often of a "Tell," which shows that they were heaps of ruins.

Melchizedek of Jerusalem is accepted as the ruler of the time, and is supposed to have been a principal figure in the original document. The passing of Chedorlaomer to Dan on the northern frontier, and his rout there by Abraham, is rather a surprising movement; but we would suggest that Dan here is the Dannah of Joshua xv, 49, between Socoh and Debir. This would be about 25 miles from the Dead Sea, in the hill-country so well known to Abraham between Beersheba and Hebron. Thus Chedorlaomer's raid was passing up out of the Jordan valley, on to the hills, apparently to go along the ridge to the capital, Jerusalem. They were caught among the hills (where their horses were of little use) by a night raid, of perhaps a thousand men of the Hebron region with Abraham, who knew the whole complex of the country, and so the invaders were stampeded up north by the Jordan to Damascus. The grateful Melchizedek came out to meet the victors, with supplies, as they had delivered him from the attack. The tithe paid was a tribute to El Elyon, the god of the heights, who had given victory in his own territory. This southern Dannah seems to focus the whole narrative into a logical history. As Dr. Albright says, "We have been accustomed to treat the narratives of the Patriarchal Age with altogether too much disdain."

CHAIÑE, M.—*Chronologie de quelques inscriptions Grecques-Christiennes d'Égypte*. This paper collects the dated Coptic steles as material for the general placing of the undated. The dates range from A.D. 533 to 1122. These should be studied with the *Recueil des Inscriptions*.

Journal of East Africa and Uganda Natural History Society. August, 1926.

LUCK, C. CARDALE.—*Origin of the Maasai and kindred African Tribes and of Bornean Tribes*. The older idea of the fixity of races has now given way to vast theories of movement from continent to continent. Here we have a project of the Bantu peoples and the Borneo race having come from Syria, and we are promised the Australians from the same source. In all such questions we must remember that a political conquest is not necessarily a tribal movement. In the Assyrian conquests of Israel and Judah, only about one per cent. of the people were removed. Nearly all the bulk of the population remained as before. The various flights of Jews into Egypt were only from the governing classes, and would not be enough to form a solid tribe to settle in another country. The main reliance of the author is on the similarity of words in Hebrew and Bantu. This ground may usefully corroborate other evidence, but the application of it here does not seem nearly enough to prove the case. The light way in which resemblances may be asserted is seen in the statement, "for Automoli is the Hebrew word Semoli, to which Herodotus has applied the Greek prefix Aut in place of the S." Masai is said to be Manasseh; 'ngana probably an abbreviation of Canaan, also Kenya; Labong and Lahang in Borneo are both from Laban. When such wide differences are accepted in means of comparison, it seems that almost anything could be proposed. When we find a reference to life-giving and fertilising properties of gold and pearls we recognise the slogan of a system which misleads the unwary.

V. STRUVE. "Ort der Herkunft und Zweck der Zusammenstellung der Grossen Papyrus Harris." (*Aegyptus*, VII, pp. 1-40.)

In 1855 some fellahin found a tomb about 225 ft. from the north-east corner of the Medinet Habu temple. In the floor under the mummy was a cavity in which were five rolls of papyri. These were sent to Mr. Harris, who bought the largest, the one which now bears his name; the rest were sold to other purchasers, and their present owners and their contents are alike unknown. Dr. Struve in this paper identifies these papyri, and shows why they were found together at Medinet Habu. The first identification is of the Abbot Papyrus, which is undoubtedly of the same dynasty; and this identification would carry with it the identification of the other papyri on the Spoliation of the Tombs. The chief proof which Dr. Struve brings forward is a papyrus in the Ambras Collection at Vienna, which is palaeographically of the same date. The papyrus contains barely two columns, which are however of the highest importance for this enquiry. The content is an inventory of the documents deposited in two pots—a common method of storing papyri. The inventory was made by a scribe of the archives; it is written in a cursive hand approximating to demotic. It is dated in the sixth year of a king, who is unnamed but bears the epithet *wḥm ms-wt*. First column: "(l. 6) Records of the palace of king User-Maat-Ra-mery-Amon in the House of Amon. (l. 7) Another roll, which is the copy of this record. (l. 8) 4 small rolls, which contain the records. (l. 9) Total of rolls in the pot, 9." Second column:

“(l. 1) Documents concerning the thieves, which are in the other pot. (l. 2) Register of the gold, silver and copper (l. 3) which the cemetery workmen are said to have stolen. (l. 4) Inspection of the pyramids. (l. 5) Examination of the people who are said to have laid hands (l. 6) on a tomb on the west of the city. (l. 7) Inspection of the pyramid of King Sekhem-Ra-x-taui. (l. 8) Inspection of the tomb of the military commander Ur, (l. 9) which the metal-worker, Ua-rs, has carried out. (l. 10) List of copper and the other things which the thieves took from ‘The Place of Beauty.’ (l. 11) Names of the thieves. (l. 12) Examination of the accused Pai-ka-hai, who was the controller.” Dr. Struve discusses at some length the mysterious sign in the royal name which has been read by various authorities as *ḥw*, *ḥb*, *mr*, *ḥw*, and *grg*, and comes to the conclusion on palaeographical grounds that it is really *šd*, thus identifying the name with Sekhem-Ra-shed-taui, Sebek-em-saf, whose pyramid was broken into and robbed, according to the Abbot Papyrus. Dr. Struve now proceeds to identify the known papyri with the list of documents; the “Inspection of pyramids” with the Abbot Papyrus; the “Inspection of King Sekhem-Ra-shed-taui’s pyramid” with the Amherst Papyrus; the “List of copper and the other things” with Papyrus Harris A (this is dated in the first month of the second season of Rameses IX’s seventeenth regnal year, the title of the papyrus being almost identical with that in the inventory). The “Records of the palace” is identified by Dr. Struve with the great Harris Papyrus, and User-Maat-Ra-mery-Amon with Rameses III. He points out that the records are of the palace, not of the temple, of Medinet Habu, and suggests that the four little rolls were copies of sections of the great papyrus. He suggests that as the palace was presented to the temple by Rameses IV, the royal archives would also be presented; and when the administration of the cemetery was also centred in the temple, the royal, ecclesiastical and administrative archives would be deposited together. Finally, when the congestion of documents became too great, the miscellaneous and out-of-date documents were packed into pots and hidden away. Dr. Struve ends by discussing the object for which the papyrus was written. It was not an enumeration of Rameses III’s benefactions to the gods in order to ensure his own happiness hereafter; it had another and equally important end in view. The prayers to the gods and the addresses to the officials are to enforce the splendour and glory of Rameses IV. Dr. Struve is therefore of opinion that the document was written in the lifetime of Rameses III at the appointment of Rameses IV as co-regent, and as such would be deposited among the official records of the palace. When the palace and temple were amalgamated the royal and ecclesiastical archives were placed together and finally, as noted above, were deposited together in a secret repository.

M. A. M.

REVIEWS.

The Amarna Age. By Rev. JAMES BAIKIE, with preface by STANLEY A. COOK. 8vo. xix + 465 pp., 32 pls. 1926. (A. & C. Black.) 12s. 6d.

In this work the author has extended his well-known ability in sound popularising to the higher level of a general historian. He weaves together the various strands of different peoples with success, and often with an independent judgement about diverging views. Thus a specialist may here gain a lesson of toleration, as well as an example of clear and attractive exposition. Mr. Stanley Cook begins by some pages on the unrest throughout the civilised world, which is reflected in the rapid changes in Egypt of the XVIIIth-XXIst dynasties. The period was one of the turning points in the history of man, when so much was in the balance; on this subject Mr. Baikie well describes (p. 232) the enormous influence of a single man, and had there been a military mind in place of Akhenaten the whole history of the East would have been far different.

The spacing of the work devotes about a quarter to the preliminary growth of Egypt, a quarter to the surrounding nations, as much to Akhenaten and his works, while the remaining quarter tells the sequel of decay and disaster. There are many good remarks by the way—that Tutankhamen's tomb extra-illustrated what was already known, but did not supply new ideas; that "it is fatally possible for a State religion to be too prosperous . . . and draw itself away from touch with the unprosperous people . . . for whom religion is a vital necessity"; and that the Egyptian gave us "accomplished work," good but not flighty, while the Cretan had a lower average but greater heights of brilliant imagination and execution.

The kernel of the whole book is the estimate of Akhenaten and his ideas. Here Mr. Baikie is judicial, and far removed from the valuations by previous writers, who would suppose the king to have been as fantastic or as dull as their own imaginations. The influences of his education are weighed, the growth of his views is traced, and the character of his extraordinary frankness is described, as where he is figured in state, gnawing a leg-bone while the queen is devouring a duck. The Aten worship is looked on as a development of older Egyptian ideas of Sun-worship, and any connection with Adon of Syria is repudiated. At the same time the great differences from earlier ideas are pointed out: the power of the sun residing in its rays, which do everything, giving life and all good things; the acceptance of all benefits as being due to divine love and goodness; the universality of this beneficence to every land alike—these were apparently new conceptions grafted on to an older faith. "There is a Nile in the sky for the strangers, and for the cattle of every country," and therefore Hapi is needless.

If anything, there is here too much kindness to the later art. Really, Egyptian art ceased to grow, to assimilate new principles, after the XIIIth dynasty. In the XVIIIth dynasty was an infection by an alien style which could not be assimilated—already in the tomb of Khaemhat work was running into formalism—and the change ended by killing native art, and only leaving mere copying

as its resource. The sculpture of Sety, quoted as "exquisite" yet "languid," is a mechanical copy of formal style, whose beauty is that of a corpse, without any real life. The sparkle of Cretan art was entirely out of harmony with the ordered suavity of Egypt; the two could not be combined, and the flirtation with the new ideas was like an Orient sage infatuated with an Italian ballet dancer.

There is a vivid recital of the Syrian affairs, the cadging letters, the grumbles of jealousy, the troubles of anarchy, ending in the despair of the faithful. The outlines of the Cretan and Hittite powers are well described, and the old Hittite king is looked on as the villain of the break-up of Syria, fomenting troubles in order to profit by others' weakness.

The illustrations are good, but a few supreme ones are missing—the Louvre Akhenaten, the Sinai Tyi. Plate IV cannot be Tyi, yet the double uraeus proves that it was of a legitimate queen, and we are reduced to conjecture that Mutemua was intended. The volume certainly gives a more graphic account of the great turmoil than can be read elsewhere.

Les Statues Vivantes. By Mme. WEYNANTS-ROXDAY. 8vo. 203 pp. 1926. (Bruxelles, Fondation Égyptologique Reine Élisabeth.) N.P.

This work is due to a suggestion of Dr. Capart to one of his pupils for a doctorate thesis. It is a careful compilation of the beliefs in (1) the extrusion of the soul into an external object, (2) the image as affecting the soul, (3) the animated image, and (4) the *Ka* and its statues. Each of these subjects has been sought in all parts of the world, in order to establish the innate structure of the general human mind on such matters. It is looked on as a natural working of thought, and not as an evidence of universal diffusion from a single centre. Such a work, so wide in its scope, will always be a useful body of reference.

There is, however, another point of view. In place of refusing—with a Frazerian reserve—to recognise, or trace, any historical connection between customs among diverse peoples, we may legitimately link together the customs of cognate tribes or races without assuming general diffusion. By inheritance it is likely that peoples having some ancestry in common will have inherited a structure of mind, a habit of thought, and a direct belief, on some of the fundamentals of life and its mystery. This consideration has not been here regarded; a principal line of comparison is with Chinese, much is American, and out of 71 quotations of belief in the first chapter only 9 are African. This neglect of the region most cognate with Egypt is unfortunate in treating of the *Ka*. The opinions of thirteen Egyptologists are quoted, not one of whom has taken into account the African beliefs which explain the position (*see* ANCIENT EGYPT, 1914, pp. 22, 162).

In the Pyramid Texts it is said that a dying man "went to his *Ka*," the dead are those "who have gone to their *Kas*." The *Ka* was appealed to for protection; "call upon thy *Ka*, like Osiris, that he may protect thee from all anger of the dead." The *Ka* helps the dead by interceding with Ra: it brings food to the dead and eats with him. The dead person lives with his *Ka*, who expels surrounding evils. In all this the *Ka* is no part of the human person, but an external genius. Yet there is no question that the living person was supposed to be accompanied by his *Ka*, who was born with him. Acts of annoyance were hateful to the *Ka*, who is thus the sense of personality; as also in acts of kindness and generosity being said to be done by the *Ka*. A son who resembled his father was said to be begotten by the *Ka*, which is therefore most essentially the person.

The whole of these diverse views are harmonised by the African beliefs in an ancestral spirit, dwelling in every man to guide and protect him. The ancestral spirit is naturally in heaven with the ancestor, but equally naturally each descendant partakes of it. Thus an ancestral portion dwells in a man, and is his true personality, while the *Ka* of the ancestor is in the next world, to welcome, help, and sustain each of the portions of the *Ka* as they arrive there. The whole idea is a perfectly logical theory of inheritance and a future life. It is a pity that this explanation has not found place in many pages given to discussing diverse opinions about the *Ka*. It is to be hoped that the authoress will give us further studies, with due regard to historical considerations.

Imhotep. By J. B. HURRY, M.A., M.D. 118 pp., 17 pls. 1926. (Oxford University Press.) 7s. 6d.

This is one of that increasing number of books written by a non-Egyptologist on an Egyptological subject; a compilation, collected from many and varied publications, of the subject which interests the author. When the author is both painstaking and accurate and possesses some critical faculty, the result, as in this instance, is satisfactory. Without making any claim to original work, Dr. Hurry has produced a monograph on Imhotep which is full of interest for the general reader. It is divided into sections giving what is known of Imhotep as a person as a Medical Demi-God, and as the God of Medicine. Under these three heads Dr. Hurry has collected practically all that is known of a deity who appears to have risen from the ranks of men to the high position of a god. For the general reader, the book provides much information in a handy form, pleasantly set forth and well illustrated; for the scholar, it is a convenient reference-book, with a good bibliography.

M. A. M.

Die Stellung des Osiris im theologischen System von Heliopolis. By ADOLF RUSCH. (*Der Alte Orient*, Vol. XXIV, Part I, 1924. Leipzig.)

The author ascribes the development of Osiris from a local to a cosmic god to his inclusion to the Ennead of Heliopolis. He dates this inclusion to the time of the Vth dynasty, and accounts for the constitution of the Ennead as follows: Atum, the time-honoured god of Heliopolis, became a cosmic god by equation with Ra. Shu and Tefnut were associated with him as his self-begotten children, and formed with him the original triad of Heliopolis. Geb and Nut were relegated to the third generation as the children of this pair. In his character of a resurrection god, Osiris needed an annually recurring foe: the ancient enmity of Set was therefore transferred by the priests from Horus to Osiris. A cosmic counterpart to Osiris as an Inundation god was to be found in Set as lord of the desert (*Sahura*, II, Pl. V) and a cosmic explanation could thus be given to their struggle by the annual destruction of the "new waters" by the scorching heat or sands of the desert. The brotherhood of Osiris and Set may be explained either by their association with Geb and Nut respectively, or by the popularity of tales of fraternal feuds. With the transference of Set's enmity to Osiris, Horus was free to become the *son* of Osiris and to fight Set on his father's behalf; possibly the inclusion of Isis in the Ennead was a further reason for making Horus the son of Osiris. The influence of the Heliopolitan system was so great that, in constructing local Enneads, other priesthoods merely ousted Atum by their own local god. Of this procedure, Memphis is the earliest example (Memphite Stela, B.M. 797).

L. B. E.

The Recovery of Forgotten Empires. By S. A. B. MERCER, D.D. 16mo. 105 pp. 1925. (Mowbray.) \$1.50.

This summary of popular lectures is attractively written, and should give readers something of the enthusiasm of the learned author. It is mainly occupied with the cuneiform world, so much so that of a dozen portraits only two are Egyptologists, both French. Lepsius and Wilkinson ought to appear, but the latter is not even mentioned, though no one impressed his generation more with the interest of the past. In welcoming this book we may note that the Roman portraits are painted with wax, not with oil; also, happy would be the digger who should find the tools described on p. 90—so far we only have their products.

Fra Faraos Land. By Revd. G. HOWARDY. 8vo. 170 pp., 106 figs. 1925. (Copenhagen, Schultz'.)

The author has given a fairly full account of the course of discovery in Egypt, for the Danish public. The researches are divided in groups according to the nationality of the workers, which is not happy either for the historical or geographical view. There is also some want of balance in the statements of results. But the book gives detailed descriptions of much of the work, and has been carefully written, keeping in view the Biblical interest of the discoveries and the general aspect of development of historical and scientific method.

Ancient Chinese Mirrors. By B. SHIMA. Folio. 8 pp. English text, 50 pls. 1924. (Kyoto.)

This splendid publication must be greeted here, as another example of the vigorous archaeology of Japan. The late Kenzo Tomioka was a learned and untiring collector, and a charming man. He collected dated and important examples of mirrors without stint; of these his friends have published 65 examples, as a personal memorial. They are printed here in brilliant collotype, ranging from the geometrical designs of about 200 B.C., the flowing curves of A.D. 150, the lumpy style of about A.D. 250, down to the wiping out of all intricacy and reverting to single subjects on a plain ground, about A.D. 700.

Studies on the Rock-cut Buddhist Images. By KOSAKU HAMADA. 8vo. 27 pp. English text, 77 pls. 1925. (Kyoto Imperial University.)

This is the ninth volume of the archaeological researches of Prof. Hamada, largely assisted by Mr. Umehara. It describes a series of rock-cut figures in the north-east corner of the south island. Photographs and plans, with a geological map, give a full record of these works, dating from about the IXth century A.D.

NOTES AND NEWS.

WE greatly regret the parting with a figure of the last fifty years—the late Professor Edouard Naville. His activities are well known, but his character was less familiar. He had the happy faculty of keeping a friendship whatever difference of opinions might occur. He also had a dislike of all partisan ways, and would protest against anything which he regarded as unfair or unjust. However others might differ from him, it never broke his intercourse if the opinions were honest. He was essentially a gentleman, and his example may well be an inspiration to others.

We have also to record the death of Mr. Somers Clarke, who was a valued member of the Executive Committee of the British School, since its foundation.

His successful career as an architect culminated in his appointment as Surveyor to St. Paul's Cathedral, though eventually he was forced to resign his duties owing to ill-health. His last years were spent in Egypt, where his co-operation as an architectural expert was invaluable to Egyptian archaeology.

The discoveries at Glozel, on the northern edge of the central *massif* of France, promise to open up an interesting controversy. The published accounts state that in a neolithic site there were found many inscribed clay tablets and small objects. Trained archaeologists, such as M. Salomon Reinach and M. van Geunap, accept these conclusions; a geologist excavates further, and finds another piece of inscribed tablet in undisturbed earth. But now there come rumours that other authorities state the site to be much later in age; others give good reasons for discriminating between the earlier finds of small, barely legible tablets, and the later improvements, which reach up to large slabs in perfect state with punctuated inscriptions. A strong point for the early age, however, is the fact that the signary used is closely like the North Spanish and Italian, while those who found the tablets only compared them with the much less similar Phoenician. Is this going to be a repetition of Lenormant and Bouriant's adventures in epigraphy? The French archaeologists have a nice problem before them.



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